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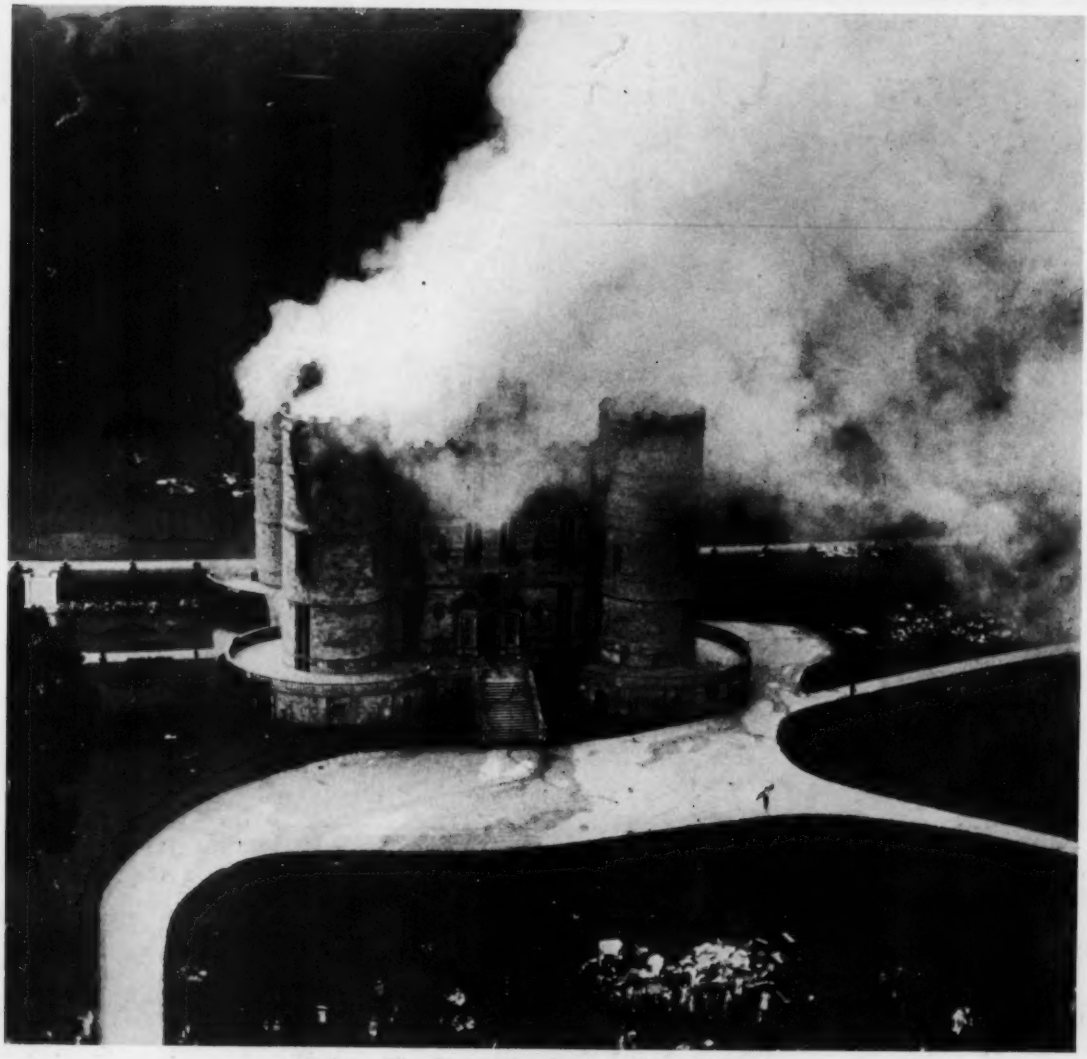
The Journal of the Fire Protection Profession

APRIL 29, 1931



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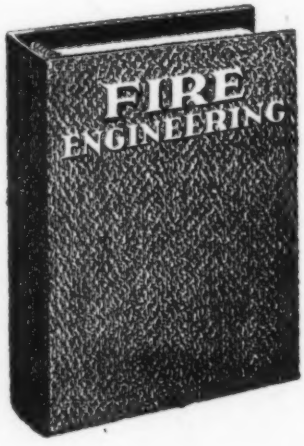

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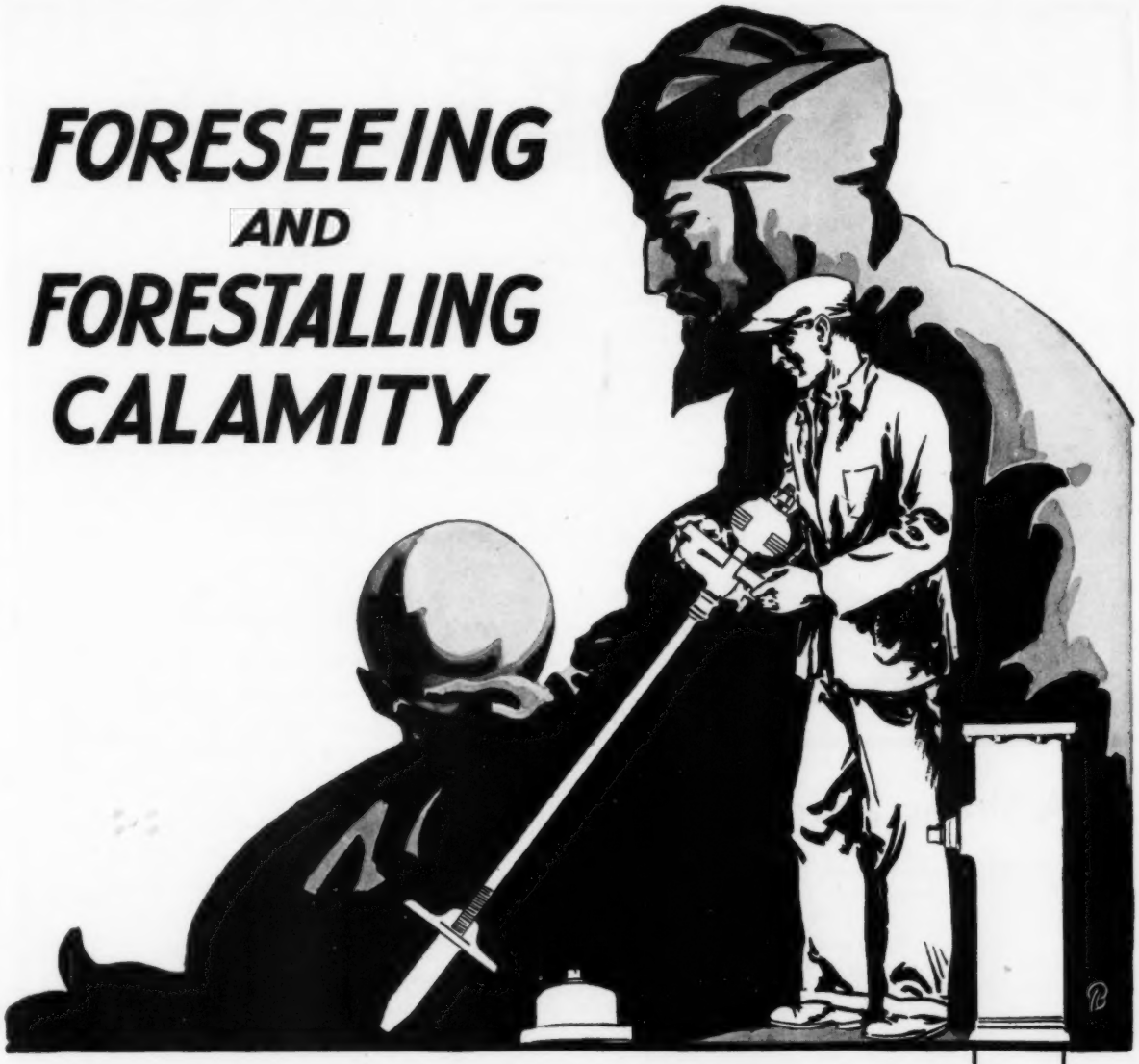

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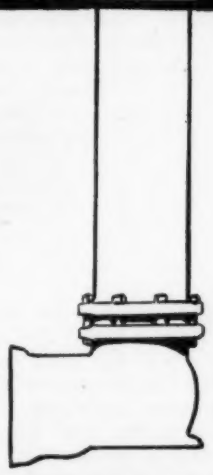

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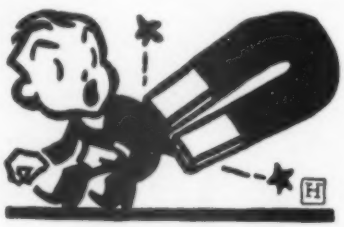

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"I don't know any way you could improve FIRE ENGINEERING unless you were to publish it every week. We never want to miss a copy."

¶ **Thanks for this ray of Florida sunshine, Chief Toole. Just as FIRE ENGINEERING is one of the "chief tools" of the Vero Beach Fire Department, so has the sparklingly progressive community of Vero Beach become one of the chief attractions along the east coast of Florida. It's always nice to be in good company, isn't it?**

The Publishers

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The Journal of the Fire Protection Profession

VOLUME LXXXIV APRIL 29, 1931 NUMBER 9

Residence Fires—How to Fight Them

Problems in Connection with Dwelling House Fires—Cellar and Stairway Blazes—Those in Bedrooms and Closets—Chimney Fires

By CHIEF JOHN J. TOWEY, Fire Department, Newark, N. J.

While the problems of fire fighting in general differ greatly according to the size of the city, those in connection with the battling of fires in dwellings vary little, as the type of construction of such buildings is pretty much the same, whether situated in the metropolis or in a small town.. The following paper will, therefore, be of quite general interest:

Chief John J. Towey, Newark, N. J.

IN discussing dwelling houses and the method of combating fires in them, permit me to say at the outset that such houses differ in construction and there is also a difference in fires—the time and place of starting, etc., for a fire is a pesky quantity, with no respect or consideration for person or property. Therefore, conditions must of necessity play an important part in the task of the firemen. Consequently, much must be left to the judgment and discretion of those in command of fire-fighting forces, as to steps to take in combating a blaze with unusual circumstances and to apply expediencies. That new features may arise at any fire is to be expected, and for this reason, we firemen must be prepared to meet exigencies and be ever on the alert.

There are general rules and a general system for battling dwelling fires or fires of other kinds, however, and strict attention to such rules and such systems will have gratifying results in the long run. In our city of Newark there is a rule—I may say a law—of general application, that the saving and preservation of human life is the paramount consideration—saving and preservation of property next. But these points are understood and require nothing on my part to add to their impressiveness.

Locate the Seat of the Fire

We have dwelling houses in our large cities, and we have dwelling in the rural districts. Urban and suburban sections do not differ so materially when it comes to a question of fire, the chief difference being one of equipment, height of building, water supply and manual force. There is a cellar and a roof to every building. A paramount point is to locate the seat of fire, play on that irrespective of smoke and keep the flame confined to the starting point, which is its natural hot bed, and watch every channel for its possible spread.

Hazards of Dwellings Open from Cellar to Roof

There are many kinds of dwelling houses and their construction differs in a great many ways, but in most cases you will find in joist construction many openings from the cellar to the roof. Builders do not always in their speed give thought, should a fire start in the cellar, how far it will travel before it finds a fire stop—and that even if it does find one, it might reach the attic.

I have seen dwellings where you could see from the cellar clean to the roof; these kinds of buildings are only flame feeders and when you stop to think, it is this kind of fire which is hard to subdue; the mode of attack on dwelling houses differs, according to where the fire started, also the magnitude of the fire.

Rule as to First Due Engine Company

There is a standing rule in the Newark Fire Department that, no matter how small or large a fire may be, the first Engine Company to arrive is first to stretch a big line as a precaution, using 2½-inch hose and then employ extinguishers or a chemical tank to extinguish the blaze, if sufficient, so as to avoid unnecessary water damage. If necessary, they are instructed to use the big line or additional ones, in case the fire has assumed dangerous proportions.

Attack Fire from Inside if Possible

The attack should be made from the inside of the building, if possible and the hook and ladder companies are to raise ladders, ventilate the building, and remove all persons

"There are many kinds of dwelling houses and their construction differs in a great many ways, but in most cases you will find in joist construction many openings from the cellar to the roof. Builders do not always in their speed give thought, should a fire start in the cellar, how far it will travel before it finds a fire stop. I have seen dwellings where you could see from the cellar clean to the roof."

in danger to places of safety. The truck company members are also to be ready at all times to pull down ceilings, open side walls and open up floors, wherever necessary, to ascertain whether the fire has traveled to other parts of the building through openings in the walls, floors or other crevices. The first officer who arrives at a fire is to assume command until the arrival of a superior officer.

In this connection, the best thing to do when having a house built, is to have fire stops constructed between floors and walls, so as to prevent fire from finding its way through the building.

Coal or Wood Bin Fires: Starting in Cellar of Dwelling Houses

A fire of this kind must be quickly confined and great care should be taken that it be headed off properly, as it may have traveled through walls, flooring, along stairways, etc. The floor above and below the fire in question should be watched closely to ascertain whether the blaze has been properly checked, and if necessary, the ceiling, sidewalls, flooring, etc., must be opened up, so as to direct a stream behind them, thereby preventing the rekindling of fire. I have worked at fires where the flames burned their way in a mushroom fashion, and penetrated wherever there was an opening. Care should be taken that all sparks, etc., are extinguished before leaving the premises.

Method of Attack

Fires of this nature are most times safely extinguished with the aid of a chemical stream. The first order given is to stretch a chemical line by way of the front cellar window, to the seat of the fire, and at the same time to lay a large line by way of the rear cellar opening, to have handy in case of need. This is a standing rule in the Newark Department, as wherever a chemical stream is used by an engine company, a large line must be stretched to back up the chemical line.

After the fire has been extinguished, a thorough examination must be made along all beams, floor-boards, and side wall openings to outside studdings, to be sure that no hidden sparks lurk there that may rekindle later on. It will be well to have men proceed up to the first floor rooms and examine the floor-base, also plaster walls directly above where the fire started, and if found to be very much heated, have truckmen remove the base-board, together with lath and plaster, after which the interior can be wet down with chemical stream, should fire be seen there.

Cellar Fires

Note where the fire started on arrival. In a fire in question, we went to the cellar and in a short time we had the fire out with the use of a big line, but upon examination of the wall on the first floor, we found that the fire had gone up between the lath and weather boards, by means of a false pocket or opening. The truck company members began ripping off some of the plaster, and a stream of water was directed at the fire. The truckmen were also at work locating places where the fire may have reached, when they discovered that the flames had eaten their way to the second floor through the walls, ceilings and floors. The truckmen began tearing the lath, flooring and boards away in different places on the second floor and wet the interior of the walls down as the truckmen opened up. Upon investigation, we found that the fire had traveled to the attic. It was found that the fire had found its way up behind the closets on the first and second floors through wall openings.

It was then necessary to go over the entire building from cellar to roof and to thoroughly examine so as to be sure that the fire was out before leaving. All places, where there was the least sign of fire, were opened up.

Method of Attack

At a fire of this nature, quick action must be taken. Having originally started in the cellar, the fire assumedly had been extinguished, but later on is noticed to have jumped from cellar to attic by way of secret pockets in walls and partitions. A 2½-inch line of hose is ordered to the cellar by way of the rear cellar stairs, and as flame is located, it is extinguished. My truckmen are ordered to examine all pipe and beam ends and openings along sill course of house and they report that the fire is making its headway upward to first floor. A second line is ordered stretched to the point where the fire has jumped on the first floor, by way of the front hall entrance, and as the truckmen open up the walls, the fire is fought at this point. It is seen, however, that the fire has traveled to the second floor. As the truckmen are ordered to remove floor-boards, base-boards and wall-plaster, a third line is ordered in by way of the front entrance up the stairway to the second floor, to this point, and walls and surroundings are thoroughly wet down. A fourth line of hose is ordered to the rear of the house and a ladder ordered raised, and the line of hose is taken to the porch roof and put through the attic window, at which point the fire is checked and finally put out. After the main fires are extinguished, the large lines should be shut down and a chemical stream used to wet all exposed openings; this is being done to keep down unnecessary water damage, if large lines are used for wetting purposes. Extreme care must be taken that all openings where fire could have traveled are thoroughly examined, laid bare and properly wet down.

Stairway Fires

In most dwelling houses, under the stairway, you will find a closet, where may be stored all kinds of clothing, hats, old paper and other miscellaneous articles, which may accumulate and which are, in many cases, of no account to the owner; this is a bad place for a fire to start, as a fire in a closet may be burning for a considerable length of time before being noticed, and if given enough time to burn its way through the walls, ceilings, floors, etc., will undoubtedly have gained serious proportions before the arrival of the Fire Department.

Method of Attack

This being a dwelling house, the fire has started in the closet underneath stairway and traveled upward through pocket in the outer wall to dropped closet ceiling and thence to the second floor. A chemical line is ordered to second floor landing where truckman at once opens up floor-boards, outside plaster walls, and a chemical stream is inserted into openings, the fire checked and cut off. A second line is ordered to the closet where fire started, the truckmen doing all necessary tearing away of baseboards, walls, and closet ceiling, so engine company can use chemical stream effectively. Several truckmen should, upon arrival, ventilate the building, at once; also raise a ladder in front or rear of the building, in case such a ladder should be required for the exit of tenants. This being a Department Rule, orders for the same need not be given.

Smoky Cellar Fires

At some cellar fires it is impossible to enter the cellar. In such cases, a line of hose is taken in on the first floor and a cellar pipe, or a Breslin Distributor, is put to work, in the meantime having truckmen ventilate and also open up wherever necessary, to ascertain whether the fire has reached the floor above, having necessary stream in readi-

(*Continued on page 324*)

London Firemen Fight Greatest Fire in Years

A seven story warehouse in London, England, was destroyed by the greatest fire that has ever confronted the city in a number of years. The blaze broke out on the Surrey side of the Thames, opposite the historic Tower of London. More than two hundred fire engines and one thousand firemen were engaged day and night in subduing the outbreak. Water froze on the outside of the building while the inside was a blazing furnace. The warehouse contained thousands of tons of tea and rubber, held in bond. Boats that were tied up alongside of ships being unloaded, helped by pumping water on the fire. Cranes used for unloading boats in front of the wharf, collapsed and crashed, when their foundations became loosened by the intense heat.

Volunteer Firemen Fighting a Typical Brush Fire with Wet Brooms, Rakes and Other Implements

Combating Brush and Grass Fire Hazards in Arid Districts

How Mountain and Desert Forest and Brush Fires Are Handled in California — Fires in the National Forests

By L. C. GORDON, California State Ranger, San Diego County

Forest and brush fires are pretty much the same in all localities. They are generally the result of either carelessness or maliciousness on the part of some individual or individuals, and are hard to control, especially on account of the lack of water and of facilities for fighting the blaze. The following paper gives some excellent suggestions as to how this situation is handled in California:

THE causes of mountain fires are many and nearly every year there are new hazards showing up. In eighteen national forests of California out of a total of twelve hundred and sixty-six fires, eight hundred and sixty-three were man-caused in 1930. While in 1929, out of twelve hundred and seventy-four fires, nine hundred and nineteen were man-caused, making a little higher percentage of man-caused fires in 1929 than in 1930. These figures really do not show the condition in Southern California, as in the four Southern forests (Santa Barbara, Angeles, San Bernardino and Cleveland) out of one hundred and twenty-two fires, one hundred and two were man-caused.

This average is again out when the state and county fires are figured in, as the Federal protected areas are usually higher and have more lightning fires. San Diego County, in 1930, had two hundred and eight fires with one hundred and ninety-four being man-caused, made up as follows: Brush burning, 58; smokers, 57; incendiary, 42; gas engine exhausts, 6; high tension wires, 4; hot ashes (thrown in grass), 3; bee smokers, 3; camp fires, 2; sparks from chimneys, 2; airplanes, 2; fire works, 2; children with matches, 2; spontaneous combustion, 2; (Feed Storage), railroads, 1; oil lamp, 1; (building), blasting, 1; sparks from forge, 1; candle at grave, 1; welding, 1; carbide, 1; and one that apparently started from a defective piece of glass magnifying; the other eight reported fires being not located.

Major Causes of Fires

The major causes in 1930 run about the same as in past years. In 1927 out of one hundred and twenty-one fires, there were thirty-five from smokers, twenty-four from brush burning, and six incendiary. In 1928, out of two hundred and twenty-eight fires, there were fifty-two from brush burning, thirty from smokers and twenty-nine incendiary. In 1929 out of one hundred and eleven fires to September 1, there were thirty-four from brush burning, twenty-eight incendiary and twenty-four smokers fires. In 1927 if the cause was not definitely known, it was put down as unknown. Since then, however, the most probable cause has been entered on the Fire Report, so that there is quite a chance of some of the fires charged to hunters being caused by carbon from exhausts.

Fireworks and Cigarette Fires

At least ninety per cent of the man-caused fires are preventable, if we can find out how. It is my personal belief that it can be done only by educating the general

public as to the values of the brush and timber cover from the angles of water conservation, prevention of erosion and recreational values.

In the past years there have been a great number of fires caused by fireworks, while the last two years there have been very few in the mountain areas. There has been in effect a state law which prohibits anyone from shooting fireworks in an unincorporated area without first obtaining a permit from a fire warden or ranger; however, the fact that this law was in existence did not make any great difference with the number of fires from this cause, but in 1929 and 1930, by giving constant warnings through the press and roadside signs, our fires from this cause have dropped to a minimum. The same applies to fires started from blasting. The number of roadside fires which are started from throwing lighted cigarettes, etc., from a moving vehicle along the roads should also be decreased, due to the amount of hazard reduction work that is being done by various organizations throughout the state. Most of the fires caused by smokers are due to the draft of passing cars fanning the lighted cigarette or tobacco until it ignites the grass; if the roadways can be cleared of vegetation to a sufficient width it should stop seventy-five per cent of the smoker fires.

Greatest Menace Incendiary Fires

Our greatest menace is the incendiary fire that is usually started at times when the humidity is lowest and an east wind is blowing, by persons who have a selfish motive, mostly due to the false impression that they will receive some personal gain in increased grazing land or possibly easier going while hunting. Even if both cases were true, the damage to the land itself from the agricultural standpoint and that to the entire community as regards water conservation, with the additional thousands of dollars spent annually for suppression, are great enough, that a public, realizing the values at stake, should take a hand in stopping this class of fire.

The balance of causes are mostly plain carelessness and persons not being fire minded enough to realize the consequence of allowing a fire to escape from their control.

Another hazard reduction activity of the organizations in charge of mountain fire control is the enforcement of a law requiring that all inflammable material be cleared to a distance of at least thirty feet from any structure. This is helping to stop fires from starting around cabins, as well as to give us a chance to save the property in case a fire is burning to it.

(From a paper read before the convention of the Southern California Fire Chiefs' Club, at El Centro, Cal.)

Plea Made for New Jersey Firemen

"No cop or fireman in the State knows when he goes out on duty whether or not he is coming back," said Ex-Governor A. Harry Moore of New Jersey at a Communion Breakfast in Jersey City attended by members of the Fire Department. He continued, "Every safeguard should be given those who are left behind in case the breadwinner is killed while answering duty's call, so that, when you go out smiling on your wife and children, that you know that no matter what may come, no matter what may happen to you, the city is standing behind you and is going to take care of the loved ones left behind."

Williamsport, Pa., Has Squad Company—A squad company has been formed in Williamsport, Pa., and will be housed in the central station.

Salisbury, Md., Has New Fire Houses—The two new fire stations erected in Salisbury, Md., are now in service. The houses were built by public subscriptions.

STANDPIPE SYSTEM TESTED IN WORLD'S TALLEST BUILDING

Tests Conducted on Standpipe System in the Empire State Building, New York City — Description of System Installed

By WILLIAM JEROME DALY

THE Empire State Building—tallest in the world—265 feet higher than the Eiffel Tower in Paris, was tested recently by the Fire Prevention Bureau of the New York Fire Department, as to its fire standpipe equipment.

The tests, eight in number, were satisfactory. The standpipe which supplies the tower of the building remans to be tested as soon as it is completely installed. At this writing the tower riser is capped and is usable as far as it has gone up through the so-called zeppelin mast. It is expected that it will be completed about May 1.

The Empire State Building
The tallest building in the world has a total height of 1,250 feet and has 85 floors. It is well provided with standpipes.

Thus far the standpipe line, pumps, tanks and appurtenances are satisfactory to engineers and inspectors of the Fire Prevention Bureau and are in compliance with the law, the ordinances of the city and the rules and regulations of the Board of Standards and Appeals.

The building is located on the west side of Fifth avenue from 33rd to 34th Streets inclusive, on the site of the former Waldorf-Astoria Hotel. It is 85 stories in height, or 1,045 feet to the main roof and 1,250 feet to the tip of the mast. The ground area is 84,000 square feet. The building is set back at the 5th, 21st and 30th floors. There are five standpipe risers eight inches in diameter to the 5th floor, four risers to the 21st floor, four to the 30th floor and two risers to the top of the main building.

The system is fed from water mains on Fifth Avenue, 33rd Street and 34th Street sides. A special four-inch water main from 33rd Street is exclusively for fire fighting purposes. The entire standpipe system in the building embraces 7,340 feet of pipe and six miles of hose. There are 324 outlets of 2½-inch throughout the building. The fire department can connect to ten siamese connections of 3-inch each. Four of these are on 33rd Street, four on 34th Street and two on Fifth Avenue.

The system has 27 control valves on vertical pipes and 49 control valves on horizontal pipes to by-pass the water in the event of rupture to or interference with the system. The highest outlet in the system is 1,230 feet. The system has been constructed to withstand a pressure of 100 pounds at the highest outlet. Each pump and tank room has a complete kit of tools and repair implements. A telephone system is present to specially facilitate the operation of the standpipe, pumps, etc.

The pumps are Le Courtney centrifugal, electrically driven. There are no steam or oil burning boilers in the building.

(*Continued on page* 325)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

IT is not at all difficult for many Fire Department officers to recall the days when young boys armed with torches preceded the fire apparatus so that the men would not trip and fall while running to a fire. When gas and oil lamps were installed to give some sort of light in the evening, there was no longer any need for the torch boys. Running to a fire ceased to be hazardous.

Today, in order to lessen some of the hazards of fighting fires at nights, special apparatus called searchlight units have been made part of the Fire Department equipment. The unit is provided with a motor and generator so that the fixed or portable lights will be independent of the city's power system. The larger cities have complete units provided with large cable reels, a large number of powerful lights for flood illumination and even jacks for connecting electrically operated drills and cutting tools.

Fighting fires at nights is becoming no more hazardous than working at daytime blazes.

In the box on this page is the problem that is discussed in this issue. In the box on the following page is the question that will be discussed in the next issue. Should you have some comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE QUESTION

Do you illuminate fire grounds at night fires?

What lighting equipment do you use?

How is the electric current provided, if it is used?

Do you believe lighting up the street in front of the fire building at night speeds up operations?

Discussion of the Question

At the present time only the larger cities have complete flood lighting units. The smaller municipalities have equipped all their units with large searchlights fed by batteries. Fire Chiefs appreciate the advantages of such equipment. The replies follow:

Joseph N. Sullivan, Chief, Utica, N. Y.: We illuminate fire grounds at night fires and use a 2 kw. K. & K. lighting plant with two stationary and two portable flood lights; two portable flood lights with batteries and two portable flood lights to connect to the electric circuit.

The lighting plant furnishes its own electricity and other lights are, as indicated, fed from wet batteries and electric circuits.

The furnishing of light in the street in front of the fire building not only speeds up operations but seems to give men more confidence. No department should be without lighting equipment.

W. H. Fuller, Chief, Vicksburg, Miss.: We do not illuminate fire grounds at night, in fact this department is without any appliances to do this work. We only have firemen's handlights, which operate with two dry cells. We also have search lights on our apparatus which we use in alleys where there are no lights. We also find the lights handy when we are picking up the hose after the fire is over.

I do believe it speeds up operations at a fire inasmuch as it gives the men a better chance to work where there is plenty of light. I think all fire departments should be equipped with floodlights for use both inside and outside of buildings. It aids considerably in locating elevator shafts and stairways. Our neighboring city, Jackson, purchased new equipment about a month or two ago. They had their service truck equipped with floodlights, and I was advised by the Chief Engineer that it is something which his department had need for a long while.

James Craney, Chief, Missoula, Mont.: I regret to say that we have no lighting equipment in our city. It is my opinion, that lighting up the street in front of the building that is burning, would have a tendency to speed up operations to a great extent, but, in a city the size of Missoula, the cost to install and maintain an adequate lighting system would be too great.

H. L. Taylor, Chief, Rome, Ga.: We only have the spot lights on the apparatus to use in illuminating of buildings at night fires, but we use them to help in fighting the fires so located where we can use the lights.

Yes, I believe that the operation of fire fighting is speeded up considerably where there is plenty of light, and a floodlight truck can be used to many advantages in the fighting of night fires.

Henry A. Fox, Chief, Boston, Mass.: This department has two lighting plants which respond to all multiple alarms of fire at night.

Each plant is equipped as follows: 2 model K 2,000-watt Kohler Electric Plants; 2 type LCE 20 cast aluminum floodlights, having 20-inch moulded glass reflectors, arranged for 500-watt lamps; 4 250-foot lengths of cable and connections, one for each light; two 125-foot lengths of cable and connections additional.

We certainly believe in lighting up the street in front of the fire building at night. Experience has taught us that it enables the men to see what they are doing and it is not only possible for them to work faster, but also much more efficiently.

In addition to lighting up the front of a building these lights, being portable, may be taken into the building and thereby facilitate inside operations.

H. J. Monahan, Chief, Berlin, N. H.: I believe that night fires should be illuminated as much as possible to speed up operations and to provide safety for the firemen.

Each piece of apparatus in our department is equipped with a revolving searchlight that may be used to light street sides of buildings. We use a portable type of carbide floodlight for alleys, rear side of buildings and for inside illumination while overhauling. The officers are provided with electric hand lights and we use a portable type storage battery searchlight for rescue work in smoke.

Ray H. Hare, Chief, Yakima, Wash.: Unfortunately we do not have any special lighting equipment. However, we get very satisfactory results from searchlights and spotlights on our trucks, police and chief officers' cars.

Lighting up the street in front undoubtedly speeds up operations, but as streets are usually lighted to some degree by street lamps, signs, automobiles, etc., we believe that more can be accomplished by illuminating

the exposure points, which in most cases will be found at the rear of the building.

W. R. Anderson, Chief, Fort Meyers, Fla.: We do not have any special lighting equipment, but utilize spot lights and head lights as best we can. Lighting up the street in front of the fire building unquestionably does speed up operations.

W. M. Seeley, Chief Middletown, N. Y.: We do not illuminate our fire grounds at night because we have not the necessary equipment for doing so. I have been trying to interest our Electric Light Company in this work and hope to be able to do so in the near future. I certainly do believe that lighting up the front, sides and rear of the building, would be of great benefit to our men working at a night fire, and would speed up operations.

W. Coulter, Chief, Framingham, Mass.: Search lights on apparatus are used when necessary. The current is supplied from batteries on the apparatus and portable hand electric lights are also used. I am a great believer in lighting up the street for the following reasons:

1. Men can work faster, and accomplish more when they have light than when they are groping in the dark.
2. In rescue work there can be no question as to the value of light, particularly on ladder work.
3. The security obtained from light at fires gives men greater confidence.

Chas. A. McGinley, Chief, E. Orange, N. J.: We illuminate fire grounds at night fires and in doing so we use searchlights installed on all engines and trucks, the current being supplied from storage batteries.

I believe in lighting up the street in front of the fire building at night, particularly on a street that is poorly lighted with street lights. I also believe that special lighting equipment gives excellent results but it is too expensive for small cities to go into, as it requires a special automobile to carry generators, etc., also the services of a fireman at all times, if good results are to be obtained. The results obtained from a few night fires that occur in small cities each year, do not warrant the expense involved. I am of the opinion that this equipment is very necessary in large cities.

L. F. McDonald, Chief, Jackson, Miss.: We have installed on our service truck one 2½ k.w. generator operated by the truck motor at a comfortable rate of speed, the current (110-volt) from generator goes through a controlling switchboard to lights; this generator easily takes care of one 500 w. stationary flood light and ten 200 w. portable flood lights. This hook-up has proven to be very valuable at night fires. The switchboard is constructed so as to use our (110-volt) local current whenever wires are available.

On our trucks we carry 30 minute white light flares fused for illuminating around fire grounds and 10 to 30 minute red light flare fusees to be used on railroads, etc. In reserve, at fire station are kept two 1,000 c.p. carbide lights.

I believe lighting the grounds and streets at night fires speeds the operation of the fire department and makes conditions much safer for all at the fire.

Frank W. Fuller, Chief, Brainerd, Minn.: We have no special lighting equipment, but we use the apparatus head and spot lights as much as possible.

It is my opinion that all of the illuminating possible should be done both on the street, and in and around the building.

It is a well known fact that a fire fighter can do more efficient work on a day fire than he can on a night fire, and it is my belief than any fireman would prefer day fires if he had a choice, so it is only reasonable that all of the illumination possible should be furnished on night fires.

E. Archibold, Chief Centralia, Ill.: We have no way of lighting grounds except with spot lights on trucks. We find that where we are able to use them it speeds up the work and makes it much safer for the men.

I think that all departments should have some means for lighting fire grounds and the current should be furnished by an independent portable plant that could be carried on the truck, or if possible have a special truck for that purpose, for sometimes the power lines are burned down.

A. Duckett, Chief, Asheville, N. C.: Yes, we do illuminate fire grounds at night fires. All apparatus including Chief's cars and supply trucks are equipped with spotlights and are always placed at strategic points.

It is my opinion that every department should have lighting equipment for this purpose if they are financially able to do so.

C. E. Ginther, Chief, Rochester, Minn.: We do not, as yet, have lighting equipment, but are considering it very strongly. We think it is a wonderful step forward for our profession, and we will in the near future have some equipment for that purpose.

C. A. Wolverton, Chief, Port Angeles, Wash.: We do not illuminate at present, as the only equipment we have is a large spotlight on each truck.

I most certainly do believe that the lighting of buildings at night would speed up the work and make it more efficient. It would also aid greatly in ladder work and would help to lessen the chance of accidents.

Elmer Roberts, Chief, Arnold, Pa.: We do not have any way of lighting at night fires except the spotlight on the truck and hand lights. But I believe that lighting is a very good way to help with the work and prevent accidents.

Wm. Stevenson, Chief, Pottsville, Pa.: We illuminate fire grounds at night fires by searchlights. The current is provided by batteries. We believe lighting up the street in front of the fire building at night speeds up the operations.

Neal Wagoner, Chief, Sidney, Ohio: We do believe that lighting up the street in front of the building would speed up operations, but due the lack of equipment we do not illuminate fire grounds at night fires other than the lights given by street lights.

I. S. Zorb, Chief, Butler, Pa.: We use hand lanterns and portolites to illuminate fire grounds at night, which we believe speeds up operations at night fires.

J. C. Sullivan, Chief, Lowell, Mass.: We illuminate fire grounds at night fires to some extent by search lights on the apparatus which is supplied by regular auto batteries. We believe lighting up the street in front of the fire building at night speeds up operations.

M. J. Fleming, Chief, Albany, N. Y.: We do not illuminate fire grounds at night fires. I do believe lighting up the street in front of building on fires does speed up operations. From a safety standpoint I think lighting up with strong lights is a great help. We are contemplating adding a lighting unit to our department in the near future.

D. M. Hudson, Chief, Chelsea, Mass.: We have no facilities for illuminating fire grounds at night fires. We sometimes use a water light to illuminate a dark passage and that's all.

A department, of course, can operate at a night fire to a greater advantage if objects are clearly discernible. To be obliged to work in dark places at fires certainly slows up operations.

Albert Herring, Chief, Murphysboro, Ill.: We do not illuminate fire grounds at night as we have no equipment for such work.

I do think it is a good plan to light up in front of fire station, as it is a safeguard to the public on the sidewalks as well as traffic in streets. We have two large lights in front of our station.

Charles G. Schrenck, Chief, Woodbury, N. J.: Yes, we

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HERE IS THE PROBLEM FOR THE NEXT ISSUE

Do you believe public and parochial schools should be equipped with lightning rods?

Have you observed specific cases where buildings were saved because of lightning rods?

Should the fire department supervise such installations or check on the work done?

With the Editor

The Smoke Ejector Proves Itself

Whenever a new piece of equipment, of unusual application, is introduced into the fire field, fire department officials are very slow to adopt it until after sufficient evidence has accumulated as to its value. And this is a desirable condition, for the nature of work of fire departments is such as to demand only proven equipment.

A few years back, Chief Charles Ringer, of the Minneapolis, Minnesota, Fire Department, developed a machine for removing the smoke from a burning building, particularly from points where it is apt to accumulate in quantity. This original smoke ejector was tried out in the Minneapolis Department and used with moderate success. Subsequent changes and alterations were made which increased the efficiency of the equipment to such a point that its ability to clear the smoke and gases from a basement fire, for example, could be fully depended upon.

Peter Pirsch, one of the pioneer builders of fire apparatus in the country, recognized the merit of the smoke ejector and arranged to build it in his plant at Kenosha. Some changes were made in design to fit the extractor for general fire department use throughout the country and, in its present stage of development, it has been made available to the field.

On April 13 a fire occurred in the Sanitary District Tunnel at Chicago, which gave the smoke ejector a real opportunity to show its worth. The machine was in the shop at the Pirsch plant at Kenosha, but not fully completed, when a call was received for it from the Chicago Fire Department. Hurriedly finishing the work on the machine, it was driven overland 60 miles to Chicago in 88 minutes.

Up to the time of its arrival, efforts to remove the imprisoned from the tunnel were fruitless, due to the intense smoke and heavy fumes present therein. Members of the Rescue Squad of the Chicago Fire Department were overcome in their efforts to effect rescues. Fourteen minutes after it was put in operation members of the department were able to start the work of removing the bodies of those who had lost their lives, and to take initial steps to rescue those imprisoned behind the barricade in the tunnel.

While the ejector quickly removed the larger part of the smoke and gases, it was in continuous operation for six hours in order to keep the tunnel tenantable for the fire fighters and rescue forces.

To its work is credited the saving of the lives of 16 men.

Thus the smoke ejector has, in a most conspicuous manner, demonstrated its real place in the fire-fighting field. It serves a need not filled by any of the present apparatus in the department; it facilities fighting fires, particularly those in portions of building where natural ventilation is not effective; it saves property damage by enabling the department to bring the fire under control more promptly.

The smoke ejector has proven itself!

A Fire Educational Bill Vetoed

Both houses of the New York State Legislature passed a bill at the last session which authorized the proper authorities of a county, city, town, village or fire district to pay through appropriation or taxation the annual expenses of members of Fire Departments of such municipal corporation or district in attending a fire training school either within such municipal corporation or district or elsewhere within the state. The expenses were to be allowed only upon the presentation of certificates of attendance issued by the school. The Chief of the Fire Department—whether paid or volunteer—was authorized to send the member or members of his department designated to the school, provided the authorization for this act was given by the proper authorities. The bill also provided that in case of a volunteer fireman attending the school, a reasonable daily allowance might be made to him for his expenses.

This bill was suggested by the New York State Association of Fire Chiefs in their convention at Utica last June, and also was endorsed by every county association of paid and volunteer firemen in the state, representing in all thirty of such bodies. The bill finally was considered after it had been introduced into the legislature, by the Law Committee of the Conference of Mayors of New York State, which, after certain amendments had been made, gave it their unqualified endorsement, and the bill was passed by the legislature in this amended form.

In spite of all of these facts, Governor Roosevelt vetoed the bill, giving as his reason for this action that he did "not believe that the members of a volunteer Fire Department should be paid for their day's wages while attending a school," and that "It (the bill) is not in keeping with the spirit which I know exists among volunteer firemen."

In view of the fact that the bill had the endorsement of practically every association of firemen in the state, and distinctly represented the ideas and wishes of these men, it would seem that the Governor's words were rather a severe criticism upon the members of a body of men who little deserved it. No volunteer fireman asks or expects compensation for his services as such

to his municipality or district. If he did he would cease to be a volunteer. But the case is very different when—according to the Governor's ideas—he must also give up his time and receive no compensation for the schooling which will render him a more efficient and valuable member of his department. This would mean, in effect, that not only must he give up his time to the services of the municipality, but also he must be penalized to the extent of losing the salary and time from his business necessary to perfect himself in the duties of a fireman.

The volunteer, it must be remembered, is a business man, and his work as a fireman—while freely and gladly rendered—must be given in his leisure time or must be deducted from the time which is his employer's. If, then, the extra time necessary for the schooling must also be taken from his business—as it necessarily must—the municipality should be willing to compensate him for this sacrifice.

If this principle which the Governor enunciated in his veto message is to be followed out to its logical conclusions, we fear that it will be much more difficult to make highly trained volunteer Fire Departments than it is at present!

Insurance Men Honor Chief Sloan

Open house was held at the Central Fire Station, Sioux Falls, S. D., by the insurance men of that city, to honor the thirtieth anniversary of Chief William A. Sloan as a member of the Fire Department.

Chief W. A. Sloan
From a photograph taken shortly after his appointment

The apparatus was parked on the approach to the station so that tables could be set for the buffet luncheon. Between five and six hundred persons attended.

Mayor George W. Burnside praised the work of Chief Sloan. It was pointed out that while the average per capita fire loss throughout the country was in excess of four dollars, in Sioux Falls it was $1.33. Following the talks, the Chief was presented with a purse containing fifty five-dollar gold pieces.

When the program was concluded, the guests inspected the fire apparatus in front of the station and the firemen demonstrated the use of some of the equipment.

The Board of Directors of the Chamber of Commerce called on Chief Sloan and extended their congratulations for his service to the city. He was recipient of many congratulations from friends who called all day long, and letters from those who could extend personal felicitations.

Chief Sloan joined the department in 1893 when it was a volunteer organization. In 1901 he became affiliated with the paid department as a driver of horse-drawn equipment.

Officials Guests of City Firemen—City officials of Pacific Grove, Cal., were guests of members of the Fire Department at a ham and bean dinner. New apparatus has been delivered from San Francisco.

GOV. ROOSEVELT VETOES BILL TO PAY FIREMEN'S EXPENSES

Measure Provided for Expenses of Paid Firemen Attending Schools and a Per Diem Sum Plus Expenses for Volunteer Firemen in State

REGARDLESS of the support given by Fire Chiefs in New York State and the approval given by the New York Legislature, the bill drafted to pay the expenses of paid firemen attending the Zone Fire Schools, and the expenses and a sum to compensate volunteer firemen for wages lost while attending the school, failed to secure the Governor's signature. In vetoing the bill, Governor Roosevelt wrote, "It is not in keeping with the spirit which I know exists among volunteer firemen."

The bill has had a considerable history.

At the convention of the New York State Fire Chiefs' Association, held at Utica, N. Y., in 1930, a general discussion was held relative to the Zone Fire Schools in various districts in the state and means to increase attendance at these schools. After a lengthy discussion a resolution was adopted to have the Law Committee of the association attempt to secure legislation that would legalize the payment to volunteer firemen of expenses at the school and a reasonable "per diem" compensation by the village, town or fire district. Also that expenses of those designated to attend be charged against the municipality.

D. S. Mersereau, Union, N. Y., who was added to the Law Committee by Chief Fleming of Albany, appeared before county and district firemen's associations at their regular conventions and explained the object of the proposed law. The resolution was endorsed by every association of volunteer and paid firemen—in all, thirty counties in the state.

The matter was then turned over to Assemblyman Whitcomb of Broome County, who had the bill drafted and introduced to the legislature.

The bill came to the attention of the Law Committee of the State Mayors' Conference who approved it after certain amendments were made. The following amended bill was reintroduced and was passed by both the Assembly and Senate.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Chapter twenty-nine of the laws of nineteen hundred nine, entitled "An act relating to municipal corporations, constituting chapter twenty-four of the consolidated laws," is hereby amended by adding a new section, to be section seventy-two-cc, to read as follows:

§72-cc. Expenses of members of the fire department in attending a fire training school. The board or body of a county, city, town, village or fire district authorized to appropriate and raise money by taxation and to make payments therefrom is hereby authorized, in its discretion, to appropriate and raise money by taxation and to make payments from such money, for the annual expenses of the members of the fire department of such municipal corporation or district in attending a fire training school either within such municipal corporation or district or elsewhere within the state. Such expenses shall be allowed only upon the presentation of certificates of attendance issued by the school. The chief or other head of such department, whether it consists of paid or volunteer members or both, may send any member or members of such department to a fire training school for instruction and practice, provided, however, that in a county,

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OUR COVER ILLUSTRATION

Unless sufficient of the modernistic is introduced in the ancient castles of England, so that proper fire prevention measures are taken, the number of stately castles will continue to decrease. The castles are generally drafty and void of modern fire breaks. Even though they are largely constructed of masonry, oak beams are used for interior decoration. The old buildings are commonly located in the center of extensive acreage and adequate water supplies for fire protection purposes have not been provided.

Smoke Ejector Made It Possible to Save the Lives of Firemen and Laborers Trapped in Chicago Tunnel

Left: Division Fire Marshal Pat Egan of the Chicago Fire Department congratulates Peter Pirsch, President of Peter Pirsch & Son Co., builder of the smoke ejector that was rushed from Kenosha, Wis. The apparatus was given credit for saving the lives of sixteen firemen and laborers trapped in an underground chamber. Right: Firemen emerging from the smoke-filled tunnel where they attempted to reach the trapped men. It was impossible for the men to remain underground for any length of time until the tunnel had been cleared from the smoke and ventilated.

SMOKE EJECTOR SAVES 16 MEN AT CHICAGO TUNNEL BLAZE

Fire Captain and 10 Others Found Dead in Wing of Sanitary District Sewer Tunnel —Rescuers Hampered by Dense Smoke

ELEVEN men, including a fire captain, lost their lives in a fire that started April 13 in an uncompleted section of the Sanitary District Sewer Tunnel in Chicago. The flames, confined in the underground passages, created dense clouds of smoke and toxic gases which enveloped the men, and the rescuers who went down later. Due to the confined space, the heat was concentrated in one section and prevented any extensive underground search. It melted the rubber clothing and burned the air hose of a diver sent down to do rescue work.

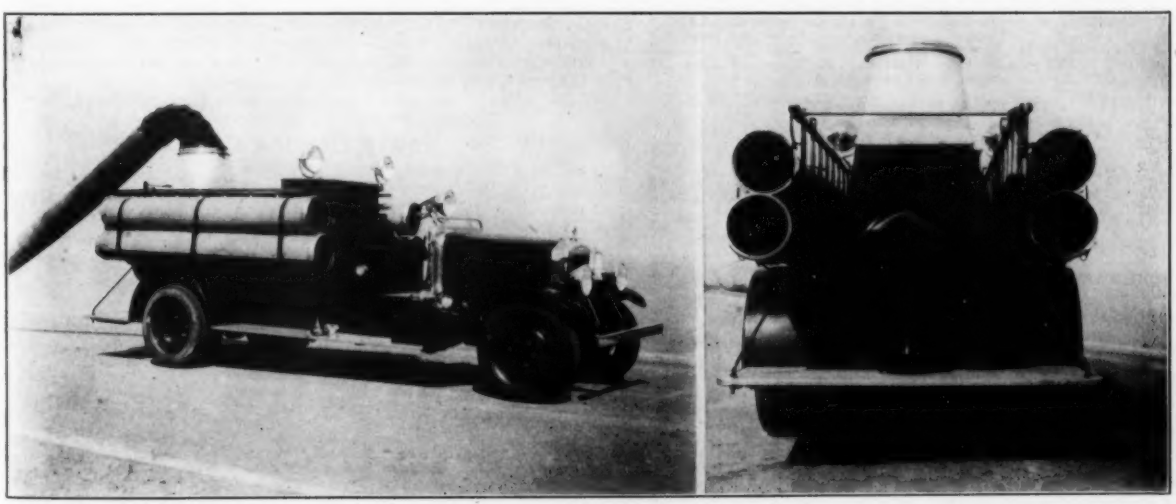
There are conflicting versions concerning the start of the fire. The head of the contracting company received notice that a leakage of air was detected in the bore. A plasterer, provided with a candle, was sent down to repair the leak. It is believed that suction at the leak whisked the taper out of his hand and set fire to the sawdust. At that time there were about sixty workmen in the tunnel. Laborers attempted to extinguish the fire that broke out, and it was not until an hour later that the Fire Department was called. A still alarm was turned in.

Engine No. 23 and Truck 14 responded at 6:43 p.m. Thick smoke was issuing from the shaft. Several minutes later other fire and rescue companies responded, followed by an ambulance squad.

Rescuers who went down at first reported that the smoke was so dense it was impossible to penetrate it with powerful portable electric lanterns. They were armed with sticks so that they could grope and feel for the bodies which were known to be in the tunnel. A rope was used so that the firemen could find their way back to the tunnel shaft. Rescue Squads 1 and 3 and Fire Squad 4 arrived at 11:22 p. m. Shortly after 1 a. m., Trucks 31 and 7 reached the fire and at 1:30, Engine 15.

The rescue work was complicated by the necessity of maintaining air pressure on the headings, as it was feared that release would cause a cave-in and break a thirty-inch gas main immediately over the tunnel. Finally this main was shut off and cleared.

Marshal Corrigan sent a hurry call to Peter Pirsch & Sons Co., Kenosha, Wis., for the smoke ejector being built at their plant. The call for help came at 2:00 a. m., Tuesday, April 14. Several men, hurriedly summoned to the plant, wired the motor, installed the carburetor and distributor,



Side and Rear Views of the Pirsch Smoke Ejector

and placed the wheels and otherwise completed the machine. At 5:45 it was ready for the trip, and notwithstanding the fact that the motor had never been turned over, the sixty mile trip to Chicago was made in eighty-eight minutes. At the Chicago city line, a police squad was waiting to escort the machine to the shaft.

Underground, sixteen men, including some firemen, had barricaded themselves behind a safety bulkhead door of an air chamber. There they huddled while the ejector drew out the smoke and fumes from the bore leading to the exit of the shaft. Fourteen minutes after the ejector started to draw smoke from the tunnel, the men who were trapped for over fourteen hours, started to come through the shaft.

The smoke ejector was originated by Chief Charles W. Ringer of Minneapolis. It was being developed by Peter Pirsch and his son William. At one time Mr. Pirsch thought the ejector would go out of service, for the main pipe had become red hot. But moisture from the tunnel, that was carried up with the smoke, cooled the metal tube. So powerful was the suction that even pebbles from the tunnel were discharged from the outlet. The ejector operated for six hours at the shaft.

The tunnel is one section of a $21,000,000 project. Construction was started four months ago and the tunnel is to connect with the main drainage canal.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending April 17	Loss in Thousands of Dollars
ATLANTIC CITY, N. J.--Brighton Block, Boardwalk & Indiana Ave.	200
CLOCKVILLE, N. Y.—Property on P. Maine & D. Smith farms....	25
OAK CLIFF, TEX.—W. Jefferson Ave. business property	80
FRANKLIN, OKLA.—School building destroyed	25
BECKLEY, W. VA.—Bldg. of Raleigh Hardware Co.	250
WARREN, PA.—McClintock grade school destroyed	100
GALESVILLE, WIS.—Centerville Co-operative Creamery	25
SAN FRANCISCO, CAL.—Lumber yard of McCallum Co., adj. property	80
NEW HAVEN, CONN.—Avon Hotel damaged	35
GRAND RAPIDS, MICH—Golden Motor Sales bldg. damaged	50
MOUNT MORRIS, ILL.—Mount Morris College bldgs. damaged	200
BOVEY, MINN.—Several business establishments destroyed	80
LAUREL, DEL.—Three business-apartment structures	45
STATESVILLE, N. C.—Property of J. C. Holmes Lumber Co.	25
YONKERS, N. Y.—Broadway Theatre, adjoining stores	40
ERIE, PA.—Pulp stock of Hammermill Paper Co.	25
STAPLETON, S. I., N. Y.—Seitz Manson, Grymes Hill	125
CHIPPEWA FALLS, WIS.—Several bldgs. at N. Wisconsin Fair Grounds	65
ROCHESTER, N. H.—Dormitory at Austin Gate Academy	25
TEXARKANA, ARK.—Whse. of Stuart Produce Co.	25
MURRAY, KY.—Tobacco barns of Outland Brothers	40
RUTLAND, VT.—Bldg. occupied by Montgomery Ward Co.	165
ESTHERVILLE, IA.—J. C. Penny store, adj. property	30
TORONTO, ONT.—Business bldg. at 45 Simcoe St.	80
THOMASVILLE, GA.—Gin plant of H. M. Groover	25
BRONX, N. Y.—Yard of Yorkville Sash & Door Co.	150
GAINESVILLE, FLA.—Fowler Buick Co. garage damaged	45
CASSADAGA, N. Y.—Plant of Cassadaga Vinegar Works, Inc.	25
GREENLAND, N. H.—Farm Property of H. M. Rupley	30
HELENA, MONT.—Drake Hotel damaged	40
CHICAGO, ILL.—Coal yards of Consumers Coal Co.	80

Week Ending April 24	
MORRISBURG, ONT.—A. H. Merkley Lumber Co. mills	35
CENTERPORT, L. I., N. Y.—Summer home of T. F. Magner	80
TORRINGTON, ONN.—Dankin bldg. damaged	40
EVANSVILLE, IND.—Faultless Caster Co., adj. property	25
BOSTON, MASS.—Cotton gin plant of H. M. Groover	25
COMPTON, CALIF.—Sunbeam Theatre destroyed	50
AVALON, PA.—Home of F. J. Frenb, Taylor Ave.	25
NORTON, MASS.—Twelve summer cottages, at Lake Winrecunnet	125
MANCHESTER COVE, MASS.—Summer home of Miss F. G. Curtis	30
NASHUA, N. H.—Nashua City Railroad station	40
STONEWALL, OKLA.—First National Bank, adj. property	70
MANSFIELD, ARK.—W. A. Martin & Son store, First Nat'l bank	35
FAR HILLS, N. J.—Home of Reeve Schley destroyed	80
WILMINGTON, DEL.—Two steamers of Wilson Line, Inc.	500
SHENANDOAH, PA.—Several business establishments	150
NEWARK, N. J.—North Reformed Church damaged	125
CHICAGO, ILL.—Grand Ave. bldg. occupied by Eddy Foundry Co.	125
BUFFALO, N. Y.—Sattler Dept. store damaged	25
WICHITA FALLS, TEX.—Plant of Panhandle Refining Co.	25
WACO, TEX.—Yards and whse. of Nash, Robinson & Co.	175
S. BERWICK, ME.—Six dwellings and five barns destroyed	45
WESTERLY, R. I.—Two summer residences destroyed	40
W. STEWARTSTOWN, N. H.—Store of Loverin Bros. destroyed	35
CALLANDER, ONT.—Pacific Hotel, Railroad station and sheds	50
SAN ANTONIO, TEX.—Frame coliseum at Exposition Park	35
GAMBIER, OHIO—Hotel and restaurant of Harry Stoyle	35
BLACKSTONE, MASS.—Institute Hall damaged	25
WOODLAND, ME.—Theatre and stores	50
HAMBURG, IA.—Two grain elevators of Good Bros. destroyed	60
CORRY, PA.—Property occupied by Corry Auto Supply Co.	25
FERDINAND, IDAHO—Two grain elevators and two whses. destroyed	80
CANONSBURG, PA.—Two bldgs. destroyed, others damaged	65
CHARLEVOIX, MICH.—Camp Manitou of University of Michigan	80
BENSONVILLE, ILL.—Clubhouse of Mohawk Country Club	40
MONTREAL, QUE.—Rock House of Dominion Rocks, Ltd.	25
ESTILLINE, TEX.—Garage and general store destroyed	25
CORINTH, N. Y.—Plant of International Paper Co.	80
WORCESTER, MASS.—Providence St. Junior High School	800
OZONE PARK, N. Y.—Lumber yard of Will & Co. destroyed	80

Chief Lutz to Address Firemen

Chief William J. Lutz of Wilmington, Del., and Chief F. E. Soulé, Coatesville, Pa., are to address firemen assembled at the annual meeting of the Del-Mar-Va Volunteer Firemen's Association that will be held at Smyrna, Del., May 13. It is expected that there will also be a demonstration of first aid and rescue work. A parade of fire companies will take place in the evening. The association has a membership of forty-one companies on the Peninsula.

North Carolina Holds Fire School

The third annual school for the training of firemen of North Carolina drew to a close at Durham recently, when more than 200 certificates were awarded by Sherwood Brockwell, State Fire Marshal.

Meeting in the auditorium of the junior high school, those attending the annual school sponsored by the North Carolina State Firemen's Association heard this session described by the Fire Marshal as the finest ever held in the state.

"Tonight is the end of the school," said Mr. Brockwell, "but it is only the beginning of the good which will result. To me this school is the realization of a lifelong dream. It is my chance to participate in the finest of schools.

"This work the firemen have been trained in is serious business. No one in the country has a greater task than the fireman for the hazard of loss by flames is one of the greatest economic problems facing the nation, and the fireman who is well trained is a member of a profession that it second to none."

Frank W. Bennett, Chief of the Durham Fire Department, welcomed out-of-state participants in the school, and invited the whole assembly back to Durham next year for another period of drills in the summer.

Certificates of attendance at every meeting during the three-day school were presented to 132 men. Seventy-two received diplomas for participating in every drill at the drill tower, and the 14 members of the Durham team were all given testimonials for their work.

A total of 261 firemen attended the three-day college, though some merely remained for three or more meetings, being unable to leave their home departments for a longer period. It was by far the largest school ever held in this state, and the officials unhesitatingly declare it the finest in point of spirit and considering the good results accomplished that they have ever participated in.

R. C. Whitley, of New Bern, President of the state association, presided at the meeting last night, and extended the thanks of the organization to the Durham department, citizens, and groups which contributed to the welfare of the visitors. Rising votes of thanks were tendered Chief Frank Bennett of Durham and others connected with the association's reception in Durham, and to Sherwood Brockwell and Chief Fitzgerald, of Asheville, for their parts in making the college a success.

D. G. SPENCER, JR.

Newly Elected Chiefs

The following have been elected to head the Fire Departments in their respective municipalities:

Wakefield, Neb.—V. H. R. Hanson.
Bound Brook, N. J.—Joseph W. Maletz.
Mineola, N. Y.—Louis Pospisil.
Northport, N. Y.—Raymond Terry.
Roosevelt, N. Y.—Carman Philip Marinowas.
Floral Park, N. Y.—Frank Williamson.
Woodstock, Va.—J. B. Clower.
Jefferson, Wis.—P. L. Waterbury.
Garden City, N. Y.—Richard A. Geis.
Ballston Spa, N. Y.—Howard L. Humes.
Moccasin, Mont.—Gus Dehnert.
North Caldwell, N. J.—George Bach.
Greenport, N. Y.—Harrie Shipman.
Dansville, N. Y.—E. J. Stiegler.
Wrightstown, Wis.—Elzier Wymelenberg.
Wayne, Pa.—James K. Dun.
Tarrytown, N. Y.—Lawrence T. Gross.
North Tarrytown, N. Y.—Joseph Schwer.
Lynbrook, N. Y.—Harold Ball.
Rockville Centre, N. Y.—Charles J. Sullivan.
East Rockaway, N. Y.—Henry Gerberding.
Valley Stream, N. Y.—Wm. Lindner.
Oceanside, N. Y.—Mahon Brower.
Freeport, N. Y.—William Briggs.
Island Park, N. Y.—Gustave Albrecht.
Cosmopolis, Wash.—Clarence Hilliard.
Columbus, Ga.—Monte McEachern.
Seward, Neb.—Albert McGrew.
Calva, Ill.—O. D. Whitmer.
River Grove, Ill.—Clarence Nielsen.
New Hyde Park, N. Y.—Errol Robinson.
Saugerties, N. Y.—Harry Desmond.
Stevens Point, Wis.—Charles Leahy.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Apparatus For Drying Hose

To the Editor:

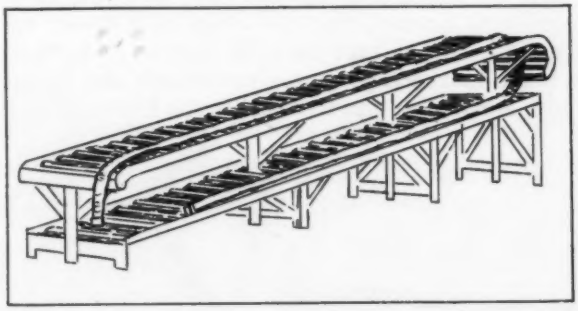
Will you please give me a little information if possible on the following:

We would like to build a drying rack for our hose. We returned from a fire the other morning and had 1100 feet to wash and dry. After washing we had to let the hose lay on the concrete floor and turn it over from time to time. I thought you could give us a pencil sketch of floor racks. Also could hang them overhead after our trucks are in the house. We do not have much room and for this reason they could not be very large. If you cannot furnish the pencil sketch would it be possible for you to advise me where to secure them. I would like to have some sketches for floor racks and if possible something to fasten to the ceiling.

R. S. J.

Answer: The washing, draining and drying of fire hose immediately after use, as well as a periodic washing and drying of hose, is very essential if the maximum service is to be secured from it.

Due to the lack of equipment such as drying towers and storage space, many departments are unable to properly care for their hose. Even though a hose tower is not available, a home made drying rack is readily made and will give



almost as satisfactory service as the more expensive tower. Such a drying rack is shown in the illustration herewith. This dryer is from 4 to 5 feet wide and 24 feet long. It can be wheeled out on the sidewalk or street and has this advantage over a tower in that the hose can be given a sun bath. This rack can be made for from $35 to $50.

Of course, the vertical hose tower is the most satisfactory of all hose drying equipment, but it is a question of getting machinery therein which will reduce the work of the department to a minimum and facilitate the hanging and removal of hose. Electric hoists are commonly employed for snaking hose up the tower, and they work with speed and efficiency.

Ventilating a Dwelling

To the Editor:

I would like to hear from you on ventilating of a dwelling building? Also the proper way to ventilate a shingle roof? The proper way to ventilate a metal or a tile roof?

S. R.

Answer: With regard to ventilating a dwelling building at a fire, the usual method is to open the windows on the upper floors on all sides of the building, that is, where the location and extent of the fire make such possible. If the fire is in the attic, the roof is usually opened up near the ridge and then opened at a lower point for operation of streams. The combination of the two openings give good ventilation and if the ridge opening is toward the leeward side, the fire will be carried away from the streams and facilitate men entering the attic when the fire is partly cooled.

Opening shingle roofs can be done very quickly with the pointed end of a pike axe, with a hook or with other appliances.

In ventilating a metal roof, where it is not covered with gravel a tin cutter is used for cutting the metal and a six-foot hook may be employed for ripping the metal off after it has been cut. Axe is then employed for cutting a hole through the roof. If the roof is covered with gravel, the gravel is first removed with a shovel.

Tile roofs present a little more difficult job in that they are usually pitched, making it difficult for the men to operate without the use of roof or hook ladders. But the opening up may be done by breaking the tile or ripping it off after a opening has been made.

Streams on Charged Wires

To the Editor:

Your attention is called to what must be a typographical error in your issue of February 18, 1931, under the caption "Streams on Electric Apparatus."

The table on safe distance should read as follows:

Voltage	Safe Distance 1⅛" nozzle feet	Safe Distance 1½" nozzle feet
1100	6	9

W. H. T.

Answer: The table to which you refer is inaccurate in that the safe distance for 1⅛" nozzle from 1100 volts line is 6 feet, and 1½" nozzle is 9 feet.

Incidentally, these figures were originally compiled by the writer at the New York Electric School in 1920 and published in *The Fire Engineer* in 1923. They are subsequently used by several different writers and quoted in different publications

Ventilating Dangers, Etc.

To the Editor:

Will you please answer the following questions in order to settle a little dispute which I had with another reader of FIRE ENGINEERING.

1. What are two principal hazards in ventilating a building? (Answer: Safety of your men and adjoining property).

2. Why do high pressure hydrants open by turning the spindle to the right and domestic hydrants open by turning the spindle to the left?

K. E. C.

Answer: With regard to ventilating a building, your answers are substantially correct. The hazards might be described a little more fully, particularly outlining the possibility of backdraft, or "smoke explosion" when the building is opened up; the hazard to property might also be a little more fully described by pointing out how, when opening a roof, there is danger of the fire rising and involving buildings adjacent to the fire building. In addition, there is the possibility of fire leaving the fire building by way of windows and reaching adjacent or adjoining property,

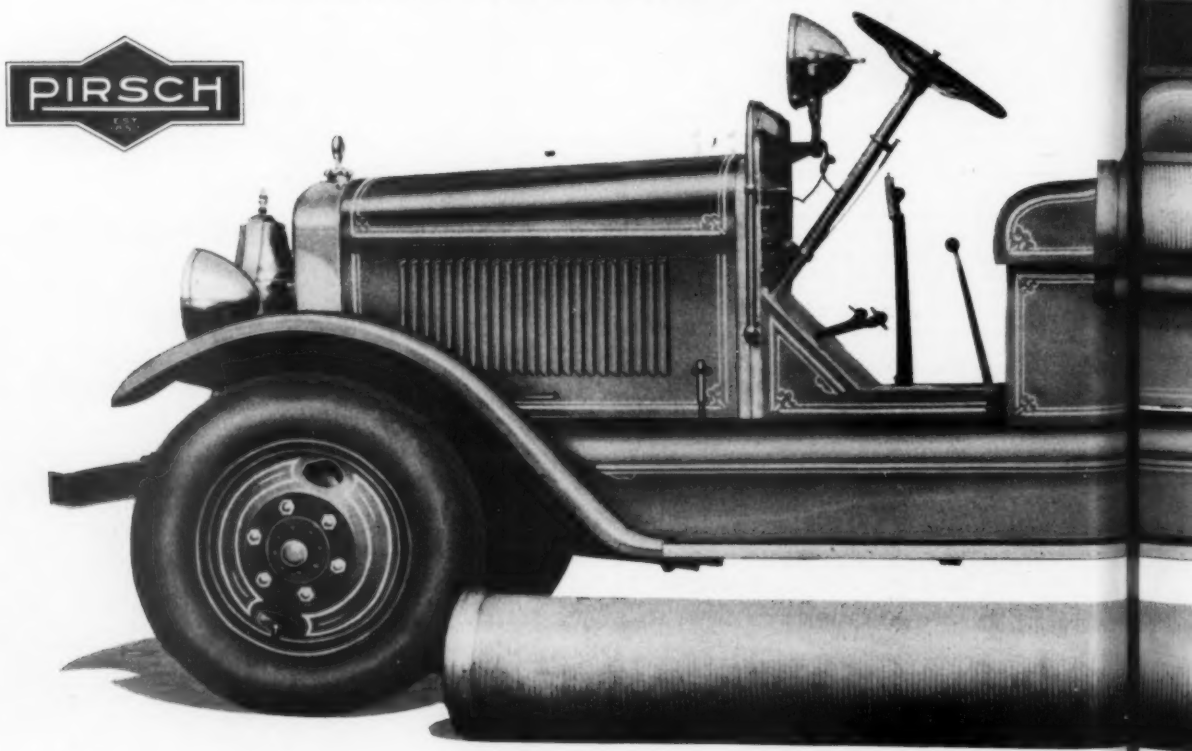
The New Pirsc

ORIGINATED BY CHIEF CHARIN

Saves 16 Lives in Cha

ORIGINATED by Chief Charles W. Ringer of Minneapolis, developed and manufactured by Peter Pirsch & Sons Co., Kenosha, Wis., the Pirsch Smoke Ejector has been given full credit by the Chicago newspapers for the saving of sixteen men trapped in the tunnel during the recent disaster in Chicago.

The Pirsch Company had been experimenting for months with the device which was to prove its worth in Chicago. The machine sent to Chicago was only partly completed when the call for help came at 2:00 A.M., Tuesday, April 14th. Several men, hurriedly summoned to the plant, worked feverishly wiring the motor, installing carburetor, distributor, wheels, equipment, tires, etc. At 5:45 the machine was ready to go, and notwithstanding the fact that the motor had never been turned over before, the 60 mile trip to Chicago was made in 88 minutes. In 14 minutes after the ejector started to draw smoke, gas, etc., from the shaft, the men who were trapped at the far end of the tunnel started to come out through the elevator shaft after having been trapped for more than 14 hours behind a wall or blanket of smoke, gas, and fire so hot it melted the rubber clothing and burned the air hose of a diver sent down to rescue them. In spite of the fact that the motor and blower on the machine had never been operated previously, it made the 60 mile run without any trouble and worked at the tunnel for six hours without



We shall appreciate your ...GINEE

Smoke Ejector

CHARINGER—MINNEAPOLIS . . . (PAT. APP. FOR)

Chicago Tunnel Disaster

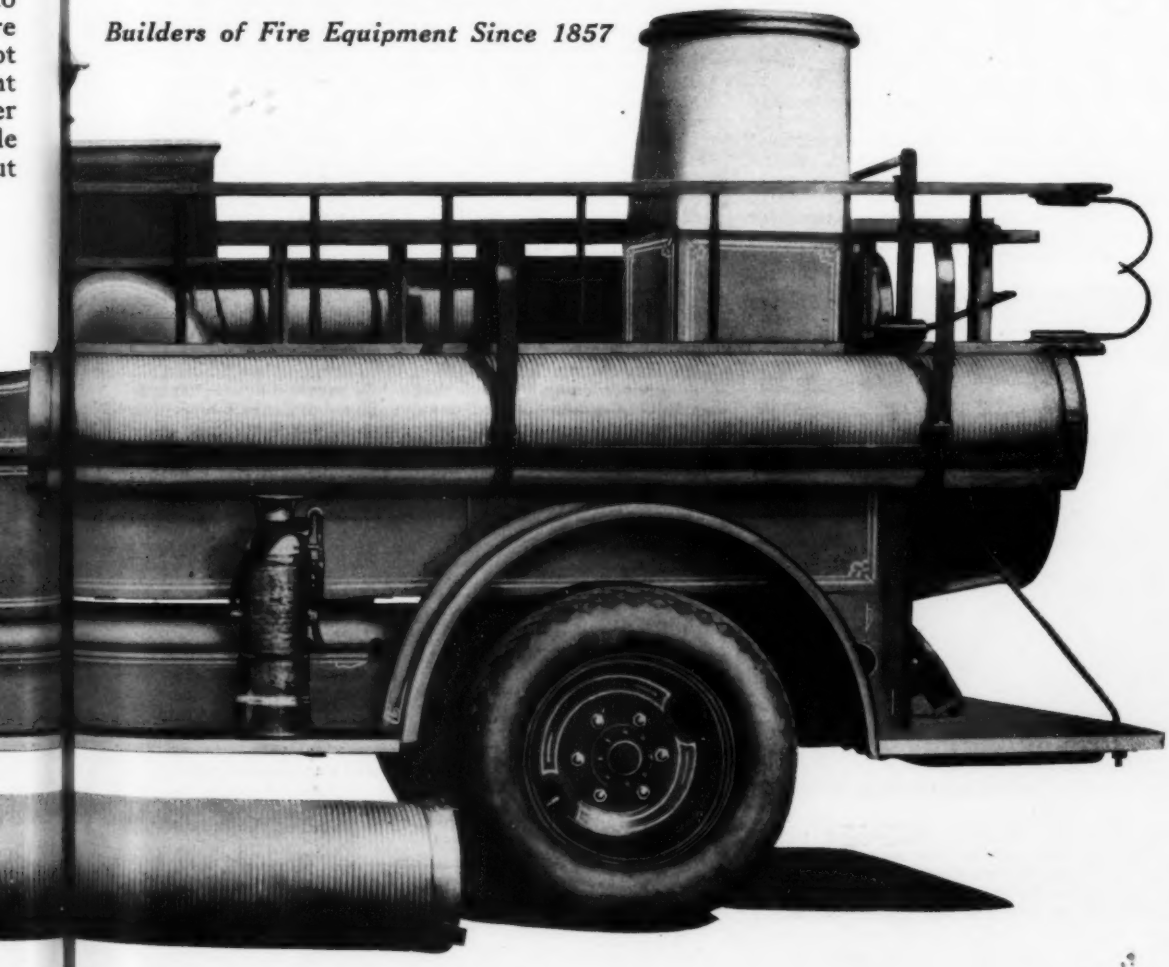
a stop. The work of getting the machine ready, and the performance at the fire were under the personal supervision of Peter Pirsch.

With this new smoke ejector, the only apparatus of its kind on the market today, Pirsch has achieved one of the most important innovations that the fire service has seen since the advent of motor apparatus. It is unquestionably the only real effective and practical solution of the worst problem fire fighters have had to contend with—the death-dealing smoke hazard. The fact that the smoke ejector is built by Pirsch is your best assurance that it is *right*. ***Write for descriptive literature.***

PETER PIRSCH & SONS CO.

Main Office and Plant: KENOSHA, WIS.

Builders of Fire Equipment Since 1857



where windows or shutters are opened, to provide ventilation.

There seems to be no logical reason for high pressure hydrants opening in a manner different from that of hydrants on domestic systems. Possibly the original designers had in mind some reason for this difference, but it certainly is not clear at the present day.

Spelling of "Fire Marshal"

To the Editor:

In our city the head of the fire department has the title of Fire Marshall. In the spelling of the word Marshall we have always used the two "ls" but I have been told that one "l" is correct.

Will you please enlighten me on this?

Yours very truly,

S. F. L.

Answer: Marshal, with one "l," is correct.

HAVANA IS PREPARING FOR FIRE CHIEFS' CONVENTION

Mayor, Chief and Local Officials to Be Hosts to International Fire Chiefs' Association Gathering, October 13-16

By GERRY SWINEHART

THIS ancient city of Havana, Cuba, scene of many historical gatherings during the more than 400 years of its existence, is actively at work these days on plans for the annual convention of the International Association of Fire Chiefs, to be held October 13-16, inclusive.

In charge of preparations for the convention is the Hon. Tirso Mesa, new Mayor of Havana and new President of the Cuban National Tourist Commission. One of the first official acts of the new "alcalde" or mayor was to interest himself in the forthcoming meeting of Fire Chiefs, with the result that during the past few weeks letters of personal greeting and invitation have gone out to officials of the Association over the signature of Mayor Mesa.

Working hand in hand with Mayor Mesa and the Tourist Commission is the new Chief of the Havana "bomberos" or firemen, Col. Jose F. Mayato, who, in the reorganization of the administration, succeeded former Chief Villegas. Both Col. Mayato and the Mayor are greatly enthused over prospects for the convention and they are making arrangements to care for more than 2,000 members of the association.

On the program, which has already been drawn up and approved by the Board of Directors of the Chiefs' Association, are parades, dinners, dances, sight-seeing tours throughout historic old Havana, and a host of other entertainments, including some surprise numbers, all so typically Cuban that they can hardly be compared with the usual convention amusements to be found in the United States.

The Old Section of Havana, Cuba

What a glorious time an American 75-foot aerial ladder would have in rounding the corners of these streets.

Actively at work on plans, too, are Austin Williamson, of the Peninsular & Occidental Steamship Company, who is Chairman of the Convention Transportation Committee, and T. B. DeFoe, Division Passenger Agent in Havana of the steamship line. Mr. DeFoe said through arrangements being made by the Florida East Coast and Atlantic Coast Line Railroads, special trains would move the convention-goers to Key West, Fla., where they will board the new P. & O. steamer, "S. S. Florida," for the trip to Havana. The new "Florida," to be placed in service between Tampa, Key West and Havana about June 1, is costing more than $2,500,000 and is one of the most notable additions to the American mercantile marine in recent years. The International Association of Fire Chiefs members will have the distinction of being the first convention travelers carried by the big new ship. DeFoe said that although the convention dates are October 13-16, inclusive, the vanguard of the chiefs is expected to begin arriving on October 12.

The Paseo del Malecon or Sea Shore Drive in Havana

Havana, which during the past few years has become increasingly popular as a location for American conventions, first bid for the meeting at the annual convention in Winnipeg, Canada, last summer. Following extensions of the invitation there, a delegation of officials of the organization, including President Joseph N. Sullivan of Utica; First Vice-President D. W. Brosnan of Albany, Ga.; Second Vice-President R. L. Smith, Pittsburgh, Pa.; Secretary James J. Mulcahey, Yonkers, N. Y.; Treasurer Peter B. Carter, Camden, N. J., and Charles E. McGinley, East Orange, N. J., made an inspection trip to Havana in January. After going over plans with officials here, they decided in a New York meeting to accept the invitation.

From a fireman's point of view there probably is no city in the world so admirably suited for a firemen's convention as Havana. Here, because of the massive stone construction and the almost total lack of wooden structures, a fire is a rare novelty. In the past year there has been only one fire in Havana which commanded even the smallest amount of newspaper attention and that's not because a fire here wouldn't be news. Thus, none of the boys need worry about fire interrupting their convention pleasures, which will be, Mayor Mesa has assured, all that can be desired.

In his eagerness to make the convention one of the most outstanding in the history of the International Association, the Mayor is leaving no stone unturned. He has suggested that if any of the boys have any special ideas for fun and frolic they communicate with him in care of the Cuban National Tourist Commission.

Oregon Pension Fund Bill Vetoed

An act that would provide a firemen's pension fund was vetoed by Governor Hartley of Washington. In a lengthy explanation of his veto of the act, Governor Hartley pointed out that the fund would be built up by the sale of junked equipment, special services and fines. He also cited the tax levy connected with the bill, and directed attention to the fact that the method of raising money was against public policy.

Gov. Hartley said, "Should this bill become a law, its blighting effect would reach all of our people, including the firemen themselves."

Pepperell, Mass., to Buy Apparatus—Pepperell, Mass., has appropriated $7,000 for the purchase of fire apparatus.

NEW YORK FIRE DEPARTMENT ANNOUNCES MEDAL WINNERS

Ten Members of Department to Receive Medals for Acts of Personal Bravery—Mayor Walker to Present Awards in June

By WILLIAM JEROME DALY

OUT of the hundeds of acts of personal bravery performed last year by members of the New York Fire Department, ten of them have been selected by the Board of Merit as deserving of medals, according to an announcement made recently by Fire Commissioner John J. Dorman, who has approved the findings and recommendations of the board, of which Deputy Fire Commissioner Joseph M. Hannon is chairman.

The medals for heroism, together with fourteen others for efficiency in Fire College evolutions and one for discipline, will be presented to the fire fighters by Mayor James J. Walker at the City Hall in June. Each medal award for valor automatically carries with it an official citation of the Fire Department, which gives each recipient certain credits in any future civil service examination for promotion.

The James Gordon Bennett Medal is awarded to Capt. Albert B. Carlson of 1792 East 34th Street, Brooklyn, in recognition of his bravery and the burning he suffered in effecting the rescue of a four months old girl at a fire in the kitchen of a home at 411 40th street, Brooklyn, last December 22. Carlson is the commanding officer of Engine Co. 66, the fireboat William L. Strong. He was off duty at 9:15 o'clock in the morning and was passing by when attracted by the fire before the arrival of fire apparatus.

Capt. Carlson crawled along the densely smoke-filled hallway of the house. On the first floor in the kitchen, which was afire, he came upon the crib of the baby. Picking up mattress and infant, he managed, under extreme handicaps of flame, heat and smoke, to reach the sidewalk, where he collapsed. Both rescued and rescuer were rushed off to the Norwegian Hospital, Carlson suffering from burns of the hands, face, neck and head and suffocation from smoke. The baby died and Capt. Carlson did not fully recover for weeks.

The Hugh Bonner Medal is awarded to Fireman Richard A. Hill of 87-82 Parsons Boulevard, Jamaica, for his rescue of a man at a fire in a three-story tenement at 188 E. 73d Street, at daybreak on June 20 last. Fire had possession of the hallway and stairs of the old tenement when Hill arrived as the chauffeur on the car of Deputy Fire Chief Frank Murphy. Hooking a scaling ladder into the second floor window on the Third Avenue side of the corner building, Hill searched about in the extreme smoke and heat and was forced to retreat to the window to get "second wind." He tried again and in a bedroom came upon a man unconscious in bed. Dragging him to the window, Hill lifted him over the sill, where Fireman George J. Fallon of Engine Co. 22 assisted Hill in removing the unconscious man down the scaling ladder to the street. Hill was severly burned about the hands, face and head.

The Trevor-Warren Medal is awarded to Capt. Louis S. J. Moran, of H. & L. Co. 16, residing at 3163 33d Street, Long Island City, for his rescue of a man and woman at the same fire where Fireman Hill effected a rescue.

Capt. Moran entered the second floor window on the 73rd Street side of the rooming house, where he found the woman and carried her down the ladder to the sidewalk. She told him of the presence of the lodger and Moran made a second trip into the fiery flat. In a bedroom he found the man unconscious. Capt. Moran carried the man to the window and then on his shoulder to the sidewalk. He showed evidences of having endured a severe ordeal of heat and smoke, but remained on duty.

The V. Henri Van Heukelom Medal is awarded to Capt. William J. Head, of 80 West 102d Street, for heroism he displayed at the collapse of the front wall and floors of a grocery warehouse at 415 Washington Street, Manhattan, on the afternoon of June 20 last. Capt. Head was Acting Chief of the 5th Battalion and first to arrived when told that a driver of a truck which was being loaded in front of the warehouse, was caught in the debris. Capt. Head crawled through and under the debris to the truck buried in bricks and groceries, only to find that the driver had escaped unnoticed when the front wall collapsed. Head continued to search about and while still in the midst of a most hazardous position in the wreckage, a second collapse occurred—this time of the upper floors—and Capt. Head barely missed death by inches when the truck was totally demolished. For the risk he took, the Board of Merit singled him out for recognition.

While Capt. Head was attempting to accomplish the rescue of the truck driver, Fireman Edward Cronin, Jr., of 320 West 17th Street, Manhattan, a member of Rescue Co. No. 1 was being lowered on a rope from the roof of the adjoining building into the ruins of the warehouse.

Cronin climbed about in the debris where a false step or a shifting of the wreckage meant death. His efforts were not in vain, however, as he came upon a warehouse worker who was trapped. Cronin managed to free Whooley and assist him out of his perilous position. A ladder was then set by other firemen between the window sill of the second floor of a rear building and the fourth floor window of the warehouse. Cronin moved his burden to the window sill, where Capt. Thomas Newman of H. & L. Co. 8, who had ascended the shaky ladder, was there to assist him. Between them, they succeeded in getting the man out and down the ladder to safety. Cronin will receive the Thomas A. Kenny medal. Capt. Newman, who resides at 586 Lincoln Place, Brooklyn, will receive the Thomas Crimmins Medal for his participation in the rescue.

The Henry D. Brookman Medal is awarded to Lieut. Thomas A. McCoy, of 1105 White Plains Avenue, Bronx, and the John H. Prentice Medal is awarded to Fireman James J. Steakon of 251 East 235th Street, Bronx, for their joint rescue of a man from the fifth floor of a tenement at 168 West 128th Street early in the morning of April 10, 1930. When the apparatus of H. & L. Co. 30 stopped in front of the tenement, Lieut. McCoy and his crew laddered the front of the building, which was belching forth flame and smoke from the windows of the third, fourth and top floors. Before the extension ladder of the truck had been completely placed against the facade of the building, McCoy and Steakon were on their way up. The tip of the ladder caught fire at the window which they tried to enter, forcing them to dodge the flames.

To attempt to enter the apartment at that point meant death and cremation. They called below to Fireman John J. Slayne at the ladder controls on the turntable of the truck to raise the ladder from the wall and shift its angle to another window. Slayne raised the ladder away from the building with its human burden at the top and aimed it at the third window away, where Lieut. McCoy and Fireman Steakem entered the smoke-filled room.

Groping about in the apartment now precariously hot and stifling with smoke and fumes, the fire fighters came upon the unconscious form of a man who weighed 200 pounds. The fireman carried the man to the window. He was so terribly burned that his seared flesh began to slip through their hands as they struggled with his unusual weight on the top of the ladder. With McCoy holding the man under the arms and Steakem clutching his legs, they managed to get him part way down, when it was necessary for Slayne to come to their aid. The injured man died later in Harlem Hospital.

The Walter Scott Medal is awarded to Fireman Bela J. Varga of 1332 Pugsley Avenue, Bronx, for his rescue of a man and woman from the debris of a two-story building at 120 Prince Street, Manhattan, which was wrecked by an explosion on the evening of August 11. Varga is a member

New York Lumber Yard Fire Develops Into 3-Alarm Blaze

Three members of the New York Fire Department were injured while fighting a three-alarm fire that broke out in the Yorkville Sash and Door Company plant in the Bronx section. Thousands of persons were attracted by the large clouds of smoke that issued from the burning lumber.

of Rescue No. 1. In company with other members of the crew he went to the roof of the adjoining building and from there descended into the collapsed building, where he found the man and the woman and carried them out of further danger. The other firemen will receive recognition, but not in the form of a medal.

The Brooklyn Citizens' Medal is awarded to Fireman Frank R. Magan of 74-39 Ninety-third Avenue, Woodhaven, Queens, for his rescue of a six-year old boy and an infant girl from a fire on the third floor of 277 Watkins Street, Brooklyn, on the night of March 17, 1930. Magan, with other firemen of H. & L. Co. 120, ascended ladders. The three-story building was afire throughout the hall and stairways and escape of the tenants by stairway was impossible. The fire was reported to be of incendiary origin. Fireman Magan entered the Hodge apartment from a ladder. He came upon the children in a bedroom and under most extreme conditions of smoke and heat he managed to carry them to the window, where Fireman William J. Rappold and Arthur L. Williams carried them to the street. Fireman Magan continued his search of the apartment until he reached the end of his endurance. He collapsed from exhaustion and had to be assisted down the ladder by Rappold and Williams. Magan was removed in an unconscious condition to the Unity Hospital.

The Stephenson Medal for having maintained the best disciplined fire company last year is awarded to Capt. Frank P. Moran, of Engine Co. 217 at 940 DeKalb Avenue, Brooklyn. Capt. Moran resides at 822 Putnam Avenue, Brooklyn.

The Fire College efficiency medals will go to the members of Engine Co. 277 at 582 Knickerbocker Avenue, Brooklyn, for having performed nineteen evolutions in the Company School in 11 minutes and 27 seconds—the fastest time made in competition last year. The members of the company are: Capt. Charles R. Schott, Lieut. Francis J. Meyerhoefer, Firemen John Calzaretto, William J. Fruchwirth, Martin C. Hager, Francis J. Higgins, Jacob W. Lauffer, William McAvoy, Edward A. McCarthy, Joseph W. Reinhart, Daniel A. Rogan, Thomas A. Stewart, Harry D. Williams, Diorato J. Chieffe.

RESULTS FROM COOPERATION BY WESTCHESTER CHIEFS

Real Test of Fire Chiefs' Emergency Plan is Described by Member at Regular April Meeting—Officers Nominated—Growth of Plan Emphasized

A REAL test of the Fire Chiefs' Emergency Plan of Westchester County, N. Y., was described by Captain Dawkins, of the Portchester Fire Department, at the regular monthly meeting, held at Fire Headquarters, Larchmont, N. Y., on Wednesday, April 15, at 8:30 p.m. He told how neighboring Fire Departments covered in at this fire, when others had been called to assist. Chief Gibson, of Mt. Vernon, also referred to the systematic way in which the plan had worked at this fire.

Two officials of the village of Larchmont, N. Y., where the Fire Chiefs' Plan originated, addressed the meeting. The first was Mayor Monroe Stiner, who in cooperation with Chief George Towle, of the village, had been largely instrumental in forming the Plan in its beginnings. Mayor Steiner gave full credit to Chief Towle for the origination of the Chiefs' Plan and the idea of enlisting the heads of the Westchester Fire Departments in an organization looking to mutual assistance in time of need. The first meeting, the Mayor said, had been held at the Lion's Club in Larchmont, at which Chief Towle had advanced his ideas and enlisted the support of the few present at the meeting. From this small beginning the organization had grown to its present large proportions.

The next speaker was Assemblyman Ralph Gamble, who made a short address, in which he expressed his gratification in being able to assist in the passage of the recently adopted volunteer compensation law regulating the indemnity for firemen injured in out of town calls. He had introduced the bill into the Assembly, Senator Westall had sponsored it in the Senate and Governor Roosevelt had signed it.

The third speaker was Trustee Watkins of Larchmont. He also referred to the great growth of the Plan and suggested that it provided a co-operative protection never before enjoyed by the people of Westchester County. He concluded by wishing the Plan an ever greater growth and usefulness. President McTavey then called for the report of the Law Committee. This was given by Chief Mulcahey, its chairman, who referred to the victory achieved through the passage of the indemnification act. He said that the New Jersey Fire Chiefs' Association had requested a copy of the law and all details, and it was probable that a similar bill would be introduced in the legislature of that state at the next session.

At the conclusion of the report a vote of thanks was passed to the Law Committee, consisting of Chief Mulcahey, Attorney Sneller, Judge Hoop and Assemblyman Gamble. A letter was read from Attorney Sneller, who expressed his pleasure at learning of the passage of the act, and who offered his services to the Plan whenever they were required.

The Chair then called upon Chief Towle, as chairman of the Nominating Committee, for its report. Chief Towle read the report as follows:

For President—Chief D. Wiley Travers, Peekskill.
For First Vice-President—Chief Arthur Steuhl, Eastchester.
For Second Vice-President—Chief James Sullivan, Greenwich, Conn.
For Third Vice-President—Chief Chet. Dobbs, Scarsdale.
For Secretary-Treasurer—Lieut. E. Riviere, Larchmont.

The Entertainment Committee Chairman, Chief Steuhl, suggested that the Plan decide upon the place and time of the annual dinner at once, so that definite arrangements could be made. It was decided to hold the dinner at the Elks' Club in White Plains, N. Y., on Thursday, May 21, the expense to be $4 per plate.

Secretary Riviere moved that the Plan apply for a charter and adopt a banner. The selection of the banner was left to the Secretary. He also suggested that the Plan should have an Auditing Committee, and the Chair appointed Messrs. Gibson, Sullivan and Mulcahey as this committee.

It was moved that the Secretary be instructed to send a copy of the Town Compensation Law as passed to all cities and villages of Westchester County. Deputy Chief Hagelston, of Larchmont, spoke of the result of the meetings of the Plan as regards the increase in friendly feeling between Fire Departments of Westchester through the workings of the Plan.

Chief Mulcahey referred to the confusion resulting from the use of telephone alarms in sections of the city of Yonkers. He cited a case where the use of a box would have saved much time and property damage. He urged the members of the Plan to tell of their experiences and give their fellow members the advantage of their suggestions.

An excellent buffet supper was served by Chief Towle and the members of his department after the meeting.

Among the Chiefs present were: Barr, Elmsford; Travers, Peekskill; Sullivan, Greenwich, Conn.; Cropsey, Greenville, Scarsdale; Dobbs, Scarsdale; Jones, Hartsdale; Ex-Chief Lemon, Mamaroneck; Gibson, Mt. Vernon; McTavey, Mt. Kisco; Mulcahey, Yonkers; Steuhl, Eastchester; Brennan, Pelham Manor; Dawson, Dobbs Ferry; Andy Bell, Supt. Fire Alarm, Portchester; Veit, Stamford, Conn.; Capt. Dawkins, Portchester; Lieut. Riviere, Larchmont, and several others. Among the Associate Members present were: T. K. Ferguson, of J. N. Hedberg; David Leerburger, Walter Kidde & Co.; H. J. Segrave, Mine Safety Appliance Company, and Robert H. Lockwood, Editor, FIRE ENGINEERING.

Fire Marshals' Section to Meet

A special program has been arranged for the Fire Marshals' Section of the National Fire Protection Association meeting which opens in Toronto May 11, according to George F. Lewis, Chairman of the Section. Mr. Lewis is Deputy Fire Marshal of Ontario.

In addition to a number of addresses on both general and technical subjects of interest to state and city fire marshals, there will be a round table discussion on selected topics.

Speakers who have been secured for the meeting include J. W. DeWeese, State Fire Marshal of Texas and Miss Olga Juniger, Supervisor of the extensive fire prevention educational activity carried on in Texas, Ernest Lavigne, Fire Marshal of Quebec, Gabriel S. Goldwater, Fire Marshal of Detroit, and T. Alfred Fleming, Chairman of the Fire Prevention and Clean-up Campaign Committee of the N.F.P.A.

Sherwood Brockwell, State Fire Marshal of North Carolina, will lead a round table discussion on stabilizing the tenure of office for Fire Marshals as a measure for increasing the effectiveness of the Fire Marshals' work.

Other topics selected for round table discussion include methods of public education, uniform inspection blanks, new developments in arson control, inspection of dwellings, publicity methods, and the training of fire prevention inspectors. Leading these discussions will be John Strohm, Fire Marshal of Iowa, C. A. Johnson, Superintendent, Fire Prevention Bureau, Minneapolis. S. L. Legreid, State Fire Marshal of Illinois, C. A. Roberts, Chief, Fire Prevention Bureau, Providence, C. V. Lane, State Fire Marshal of Michigan, and Frank V. Gallagher, Chief, Fire Prevention Bureau, Rochester.

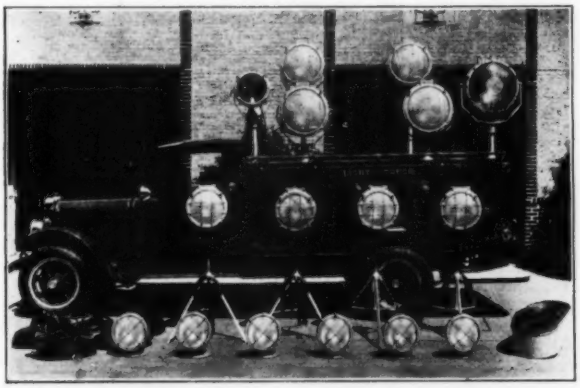
Beaumont, Tex., Has Searchlight Car

The shops of the Beaumont, Tex., Fire Department have assembled equipment for a searchlight car, believed to be the largest in the state of Texas.

The body is mounted on a Reo truck with 151-inch wheel base capable of carrying a 6,000 pound load. The power plant is a Westinghouse D.C. 11½ kw., 125-volt generator driven by a 29 h.p. Hercules motor and developed 14.7 kw. on tests. The switch board is mounted and installed in the cab of the truck and consists of ammeter, voltmeter, main line circuit breaker, double pole, double throw 200-ampere switch and twelve branch circuits controlled by Westinghouse sentinel circuit breakers.

There are four flood lights with 1,500-watt lamps, one flood light with 2,500-watt lamp, one with 1,500-watt projection lamp mounted on elevator on top of the truck. Four lights with 500-watt lamps are arranged on special collapsible stands with 25 feet of Tirex cable; six lights with 250-watt lamps are mounted on the wheel base with 25 feet of Tirex cable.

Two Appleton cable reels with 400 feet of No. 8 Tirex cable on each are equipped with collector rings and brushes. There is 800 feet of No. 10 Tirex cable with connectors arranged in various lengths, 1,000 feet of No. 14 Tirex cable



Searchlight Car in Use in Beaumont, Texas

with pin connectors arranged in various lengths. All wiring between lighting units, generator, switchboard and cable reels and receptacles is lead covered, rubber insulated wire. Light units on top of the machine are connected with pin connectors so as to be easily removed if necessary.

Doors are provided on each side and the rear to permit access to the cable reels, portable lighting equipment and power plant, and to provide ventilation. Provision is made to prevent gasoline leaking from the carbureter to drain on the engine room floor. There are large towing irons on the front and rear of the truck for towing purposes. The interior lighting of the body is served from the starting and lighting battery so as to have available lighting around the machinery in case the power plant is in trouble.

Lighting units mounted on the top of the truck are arranged to be raised and lowered a distance of five feet and to be turned in any direction desired. The cable reels are handled with a similiar arrangement. All of the portable and stationary equipment are provided with diffusing lens and hammered reflectors to minimize glare. The 14-inch light is provided with a clear lens for distant flood lighting. The total cable equipment on this truck is 2,600 feet.

Gardner, Mass., Has New Pumper—Gardner, Mass., has placed a new pumper in service.

Pumper Delivered to Ardmore, Pa.—A 500-gallon pumper equipped with a 100-gallon water tank, has been delivered to Ardmore, Pa.

Lecture Course Planned for Industrial Chiefs—The Safety Council of Newark, N. J., has announced a series of lectures for industrial fire chiefs. The list of lecturers includes Chief August Gerstung, Elizabeth, N. J.; Chief Reginald Bowker, Passaic, N. J.; Chief Charles McGinly, East Orange, N. J.; Chief John J. Towey, Newark; James T. Keegan, Superintendent, Newark Salvage Corps; Chief Charles W. Greenfield, President, New Jersey Fire Chiefs' Association; T. Alfred Fleming, National Board of Fire Underwriters.

New York Working for 3-Platoons

The Uniformed Firemen's Association of Greater New York is preparing a campaign to arouse public sentiment in support of the three-platoon system for firemen. There is now a bill before the Board of Aldermen which proposes to amend Section 734 of the Greater New York Charter relating to the hours of duty of members of the uniformed force of the Fire Department. Under the three-platoon system no fireman would be required to work more than one tour of duty of eight hours a day, except in event of an emergency, and he would be entitled to one day of rest in every calendar week.

With the two platoon system, firemen are on duty eighty-four hours a week and every sixth day they work a full twenty-four hours.

Uniforms are paid for by the firemen, and all rubber goods, as boots, helmets and so forth, are treated as personal expenses. Even the salaries of matrons in the fire stations are paid by the firemen.

If the three-platoon system is adopted, more than two thousand firemen would be added to the New York Fire Department. The Association estimates that this would add three-tenths of a mill on a $100 assessed valuation for the taxpayer.

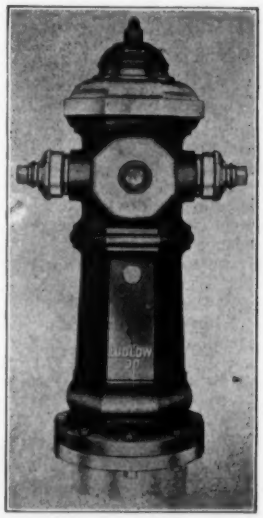
Courtland F. H. Freese Dead

Courtland F. H. Freese, founder and Treasurer of the Globe Manufacturing Company, Pittsfield, N. H., died the evening of March 22. He was born in 1872 and for forty years had been connected with the business life of Pittsfield.

Mr. Freese served as representative from Pittsfield in the 1929 New Hampshire Legislature and at the time of his death was representing Fourteenth District in the New Hampshire Senate. He was a past-President of the Chamber of Commerce, Trustee of the Pittsfield Savings Bank and a Director of the Pittsfield Weaving Company.

Ludlow Puts Out New Hydrant

A fire hydrant designed to conform with modern lines of street lighting standards, traffic towers and highway posts is being manufactured by the Ludlow Valve Manufacturing Company, Troy, N. Y. The new hydrant is octagonal in shape and each of the flat surfaces reflects light so that the new form makes the hydrants more visible and more easily found.



Ludlow Diamond Hydrant

The body is not integral with the barrel but ends in a flange which is bolted to the barrel flange just above the ground line. The bolt holes are so arranged that the hydrant nozzles can be set in any direction required, without disturbing the lead from the main.

Should any breakage occur, by merely releasing eight bolts the old body can be removed and a new one substituted. No digging is necessary. Changes have also been made in the hydrant bottom. The Ludlow gate valve is used. The gate is lowered free and forced squarely against its seat by a wedge nut at the back of the gate. Once the gate is closed with the drip valve open, it cannot be pulled free and can only be released by turning the valve stem. This prevents the flooding of the hydrant even though the body may be broken. Variations in grade can be overcome by selecting the proper length of connecting barrel.

George A. Patterson Aids Salvation Army—George L. Patterson, President, Stanley & Patterson, New York City, has been appointed Chairman of the Electrical Contractors Section to aid the Salvation Army in a drive for $528,000 for the support of the fifty-two permanent centers of the Army's work in Greater New York. Funds raised during the past winter were wholly for emergency relief and did not provide for maintenance of these regular activities. The campaign is from May 18-June 1.

Residence Fires—How to Fight Them

(*Continued from page* 308)

ness at all times, also open up about three boards above lower trim to expose the fire. Care should be taken to examine all pipe openings, walls, floors, etc., to ascertain the course of the fire and carefully extinguish all fire before leaving.

Method of Attack

Fires of this kind are at times hard to reach owing to the fact that there is most generally only one outside point to effect an entrance, that being by a rear cellar door or by small cellar window, or an inner stairway leading from front hall down into cellar. The smoke, heat and gases that accumulate cannot be carried off quickly enough to enable men to subdue flames in the cellar. A large line is at once ordered into cellar by rear outside cellar door and water poured on fire from that point. Second order is to have truckmen proceed into first floor hallway as far as possible, and open up floor, so that engine company can stretch in a second line hooked up with a Breslin Distributor, which is then lowered through the floor opening at this point. Next, order is given truckmen to ventilate entire building; also to remove the first and second courses of weather-boards above the water-table line. This will enable the smoke, heat and gases to be drawn off from the cellar, giving the men the chance to enter, with the line ordered through rear cellar door, and get to the seat of the fire.

We discover, upon removal of the outside weather-boards, that the fire has already traveled up through the sides of the building, making its way to the second floor. An order is given at once for engine company, which had been ordered to stretch in a large line and stand fast to turn on water, and proceed to the second floor, with truckmen. These then will at once open up in walls, so as large line can be directed into openings made. Orders are given to remove the Breslin Distributor from the line used on first floor, and to connect up to play-pipe, and while proceeding up the stairway to extinguish all fire seen. The line having been ordered to the second floor at once, is ordered to the attic by way of the scuttle hole in attic ceiling.

Orders are given the truckmen to remove plaster and lath from ceiling on the first floor for a distance of one parallel to the side wall of the house, and the same on the second floor ceiling, in order to enable men to have clear view to examine all beam openings and stud-pockets. The last company left at the fire should wait at least fifteen or twenty minutes and watch and also look for any sparks that may not have been seen. Be sure to have every part of the building looked over, so that all fire is out, before leaving to return to company quarters.

The wooden plugs ordered to be put into gas-pipe openings are generally carried by all truck companies for such purposes, and are made by the company members during leisure hours at company quarters. They vary in size from ⅛ up to 3-inches in diameter, and are made out of soft wood.

Bedroom Fires

These fires are very trying on the firemen, as they must stand the gases and the heat. The method of attack is usually by means of chemical extinguishers or tanks, backed up by a big line, so that, should the same be needed, it will be at hand. These fires are fought from the inside, if possible, by way of stairway, ladders or other means, and upon extinguishing the fire great care should be taken that no fire or sparks are left to rekindle. If necessary, open up the walls, ceilings, floors, etc., to make sure that the fire has not traveled to any other part of the building.

The first order given here should be to have truckmen, as quickly as possible, ventilate the building, and at the same time ascertain whether all occupants or tenants are accounted for and safe. Chemical line and extinguishers should be brought to put out the fire. Care should be taken, after the fire has been extinguished, to look over all cracks in walls, loosely fitted window or door casing, loosely fitted base-boards and cracks in floors, as all these openings are conveyors of fire and flame. Another point at fires like this should not be overlooked, and that is, the pulley pockets in window frames. If curtains are burned away and sash-rope burned off, weights dropped down inside window casing must be removed, along with window apron underneath window sub-sill, and if on fire, properly wet down with chemicals.

Clothes Closets Fires

Chemicals streams are generally used on fires of this kind, which in most cases are smoky and hot, and when the fire has gotten through the walls or flooring or ceiling the danger is not great. On the other hand, if it has gotten back of the lath, and the closet is alongside of a mantle piece, quick action is necessary, as in some dwellings you will find that, where a mantle piece is put up, the chimney is only 1½ feet by 2 feet, therefore leaving a space of 2½ feet of a pocket between the mantle and the side of the house. This space is open clean to the attic, so precautious must be taken, by opening up walls wherever necessary, to ascertain whether the fire has not traveled to other parts of the building.

Method of Attack

Use chemical extinguisher, if fire is of small proportions, and chemical tank if of larger proportions. After removing all burned clothing, rubbish or such objects that have collected in these closets, an examination should be made of all corners, cracks, and crevices, in these pockets, in order to ascertain whether fire has entered in behind the casings to the space between lath and plaster. Where fires originate in kitchen closets, the walls nearest the chimney-place must be exposed, since in most cases there is an open space from two to twelve inches left, which reaches from cellar beams to attic roof, and acts as a blind flue along side of chimney. Should fire have entered here, then entire closet wall should be opened up to allow a man's head and shoulders to pass through, in order to examine the open space and use chemical line to put out all fire.

Chimney Fires

Chimneys are, as a rule, all constructed on similar lines. In old-fashioned frame dwellings, there is generally an open arch or fire-place covered over with a metal drop pan. In case of fire in such a constructed chimney, this pan should be removed, after an extinguisher has been used on burning soot from upper part of the chimney by way of the roof. Where wood mantles are employed on the outside of such a chimney, it is well to examine all wood skirtings to see whether or not fire has lodged behind same. In some chimneys the clean-out pocket is located in the cellar near the basement floor, where a heavy coating of burning soot is encountered in such a chimney, sand, ashes, or gravel may be poured down chimney from roof above, to break loose all burning soot hanging on sides of the masonry. Chimneys of old-fashioned construction where no flue linings exists, should be carefully examined for leaks in brick work, such as bad joints, loose bricks, or possibly where mortar has been shaken out of joints.

Lace Curtain and Window Shade Fires

The attack is most generally with a chemical line or an extinguisher from the inside; then an examination is made to see whether the sash cord has been burned off and dropped into the pocket of the window frame and also ascertain if there is any fire there. In such cases, have the truckmen take off the casing, which will afford a clear view.

If there is any sign that the fire has gotten back of any inside casing, then the truckmen should pull the casing off, in order to expose inner jackets, so that a stream can be directed where it is needed.

Rescue Work

When about to effect a rescue, the men who enter a building for that purpose, should be protected by one or more large streams of water, so as to guard and refresh them, thereby enabling them to successfully accomplish the rescue.

Benzine—Gasoline—Kerosene

When a fire has been caused through the use of benzine, gasoline, kerosene or other oil, and it should have happened on the floor of a frame building, the proper procedure would be to follow path of fire taken, should oils have run underneath base-boards or through crevices in floor-boards; if any, then base-boards and floor-boards undoubtedly should be removed, as flame will travel along all places wherever such oil has trickled.

Electric Wiring of Dwelling Houses

Where the old style electric wiring is employed in any of these dwelling houses, care should be taken when a fire takes place, that all pockets that such wiring (which is of the knob and tube style) passes through, be watched and examined. The first thing is to shut off the current at the main switch-board. When the truckmen opens up woodwork, wherever such wiring should pass behind or underneath, care must be taken not to cut through wiring, nor

come into contact with axes, in case current should not be thrown off.

Fires directly due to faulty conduit, switch-boxes or soldered joints, should be laid bare of all surrounding woodwork, and, of course, main electric current shut-off before any opening up work is begun. Wherever such wiring is noticed to have been cut off or burned through (while doing overhauling work), it should be brought to the attention of the officer in charge of the fire, who should make sure to see that the electricity is not thrown on again, until damage to wiring is repaired. He should notify the owner or occupant of building.

Our reason in taking these precautions in regards to electric wiring is, that due to wiring being cut or severed, after main fire had been extinguished and all companies had been ordered back to their respective quarters, the department has been called to the same address a second time, to an entirely new fire, which had been caused through a cut wire, after current had been unknowingly thrown on again by the owner or occupant of the building.

Thawing Out Frozen Water Pipes

In the thawing out of frozen water pipes, care should be taken not to use lighted paper, open flames, torches or lighted candles, as openings where pipes lead from floor to floor are strictly speaking small flues through which the flame will be drawn or sparks be sent up. This will ignite woodwork surrounding such pipes, especially where there are cobwebs, or where shavings, saw-dust or paper had been left by mechanics when the house was erected, or where pipes had been protected by paper or rag wrapping in order to shield them against frost. Special care should be taken where such fires occur underneath water and waste pipes in toilets. Most generally these pipes are set close to the wall in a corner of the toilet or bath-room, then covered over with boards or with lath and plaster partitions, which run from cellar ceiling to attic floor, forming one direct pocket. Should fires occur in such pockets, or pipe boxes, a chemical line should be at once sent up to attic floor space, and entire inner side of such pocket wet down, as that would be the point to check and cut off the fire, in order to keep the flames from traveling to the open attic. Truckmen should be ordered to tear off wood covering over such boxes, also open up floors, or walls wherever pipes should lead through. The most safe method in thawing frozen pipes is with hot water or better still, with cloths soaked in hot water.

(From a paper read before the quarterly meeting of the New Jersey Fire Chiefs' Association.)

Empire State Building Standpipe Test

(*Continued from page* 310)

It is heated by a steam supply company under contract. The pumps are located as follows:

Sub-cellar—750 g.p.m, 200 h.p., 5 stage, 9 speeds.
20th floor—750 g.p.m, 200 h.p., 5 stage, 9 speeds.
41st floor—750 g.p.m, 200 h.p., 5 stage, 9 speeds.
62nd floor—750 g.p.m, 200 h.p., 3 stage, 5 speeds.
84th floor—280 g.p.m, 40 h.p., 3 stage, 1 speed automatic.

The tanks are located as follows: Sub-cellar—12,000 gallons total, for fire fighting only.

21st floor—11,000 gallons total, 2,500 for fire reserve.

21st floor—11,000 gallons total; 2,500 for fire reserve.

The two tanks on the 21st floor are cross connected, giving a combined 5,000 gallons for fire reserve.

42nd floor—5,000 gallons total for fire reserve only.
63rd floor—12,000 gallons total, 5,000 gallons fire reserve.
85th floor—14,000 gallons total, 3,500 gallons fire reserve, gravity only.
Tower—5,000 gallons total, 3,500 fire reserve, for tower service only.

The tests, abbreviated for this description without amperage or voltage readings, were as follows:

Test No. 1—sub-cellar to the 21st floor tank, with gauge at the 18th floor outlet; pump at first speed showed two pounds suction, discharge 163; 18th floor gauge 55; pump raised in four minutes to 5th speed showing 1½ pounds suction, 188 discharge; 77 at 18th floor and 34 pounds on the 1⅛" smooth bore nozzle at the 21st floor tank.

Test No. 2—sub-cellar to 42nd floor tank, with gauge at 39th floor outlet. First speed showed 2½ pounds suction, 208 discharge, 10 pounds on 39th floor gauge. Pump in four minutes at 9th speed showed 2 pounds suction, 307½ pounds suction, 307 discharge, 78 on gauge at 39th floor and 40 pounds on nozzle at 42nd floor tank.

Test No. 3—20th floor to 42nd floor tank, with gauge at 39th floor outlet. Pump at first speed showed 7½ pounds suction, 158 pounds discharge, 55 at 39th floor outlet. Pump raised in two minutes to 5th speed showing 8 pounds suction, 184 discharge, 80 pounds at 39th floor outlet and 35 on nozzle at 42nd floor tank.

Test No. 4—20th floor to 63rd floor tank, with gauge at 60th floor outlet. Pump at 1st speed showed 7½ pounds suction, 210-20 pounds discharge, 10 pounds at 60th floor outlet. Pump raised in four and one-half minutes to 9th speed, showing 4½ pounds suction, 301 discharge, 80 pounds at 60th floor outlet and 34 pounds on nozzle at 63rd floor tank.

Test No. 5—41st floor to 63rd floor tank, with gauge at the 60th. Pump at first speed showed 6½ pounds suction, 158 discharge, 60 on gauge at 60th floor. Pump raised in three minutes to 5th speed, showing 5½ pounds suction, 186 discharge, 85 at the outlet and 35 on the nozzle at 63rd floor tank.

Test No. 6—41st floor to the 85th floor tank, with gauge at 82nd. Pump at 1st speed showed 6 pounds suction, 213-25 pounds discharge, 10 pounds on gauge at 82nd floor. Pump raised in four minutes to 9th speed showing 7½ pounds suction, 303 discharge, 85 at the outlet and 32 on the nozzle at 85th floor tank.

Test No. 7—62nd floor to 85th floor tank, with gauge at 82nd floor. Pump at first speed showed 9½ pounds suction, 110-112 discharge, 10 pounds at outlet on 82nd floor. Pump raised in two minutes to 5th speed, showing 8½ pounds suction, 192 discharge, 80 on gauge at 82nd floor and 32 on nozzle at 85th floor.

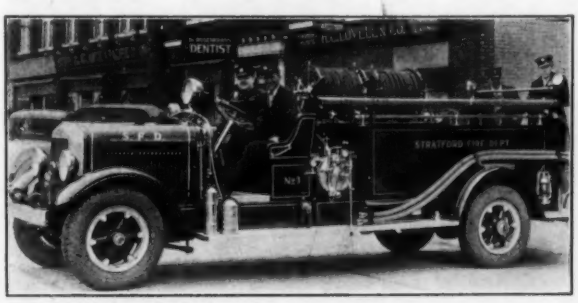
Test No. 8—Relay with four pumps in unison, with readings taken at the 62nd floor outlet gauge and nozzle gauge readings at 82nd floor. Pump at first speed showed 8½ pounds suction, 110 discharge, 10 pounds at 62nd floor. Pumps raised in one and a half minutes to 5th speed, showing 9 pounds suction, 192 discharge, 80 pounds on outlet gauge and 33 pounds on nozzle at 82nd floor.

The first test was observed by Fire Commissioner John J. Dorman, Chief Peter C. Spence of the Fire Prevention Bureau and Assistant Chief Patrick Walsh of the uniformed force detailed to the Fire Prevention Bureau.

Commissioner Dorman threw the switch which started the first pump on its way. The actual tests were made under the supervision of Chief Inspector Michael J. Reidy, assisted by Inspector Thomas Murphy, Chief of the Mechanical Division of the Bureau, Mechanical Inspectors Dennis R. O'Connor, Robert E. Alster, George Walters, Chris Maddox, Edward Bransfield, Leo McAvoy, Chief Electrical Inspector William Mulligan, Electrical Inspectors Frank Zeiser and Richard E. Lent.

Salvage Corps Recommended in Providence—The Chamber of Commerce, Providence, R. I., has recommended that a salvage corps be established in that city.

Historical Exhibit Planned for Ft. Worth—In connection with the opening of its new central fire station and fire alarm headquarters, a historical exhibit is being planned in Fort Worth, Tex. A number of old fire department relics are being collected and assembled for the exhibit.



Apparatus Delivered to Stratford, Conn.

Stratford, Conn., has placed in service Buffalo fire apparatus equipped with a 150-gallon booster pump. The unit has a wheel base of 168 inches. There are two booster tanks of 100 gallons each; one 40-gallon chemical tank with 200 feet of hose and other standard equipment. This is the first booster pump purchased by the town of Stratford.

THOMAS F. MAGNER.

The Round Table

(*Continued from page* 312)

light fire grounds immediately. We use portalites, both beam and floodlights. These lights are equipped with 27-plate storage battery. We decidedly do believe in lighting up the street in front of the fire building at night to aid in speeding up operations.

M. W. Lawton, Chief, Middletown, Conn.: The only lights we use are the large lights on the trucks.

When we have anything that requires a good light the Power Company sends its truck and men to connect to the street line and give us two large portable lights.

I believe lighting up the street and building speeds up operations as the men can work to better advantage.

John Marks, Chief, Valparaiso, Ind.: We do not illuminate grounds at night fires except by the spot lights from our trucks, but we certainly believe lighting up the street in front of the fire is a good idea.

August G. Derra, Chief, Schenectady, N. Y.: We illuminate fire grounds at night fires by search lights on the apparatus and by carpenter hand light. I believe it is a good idea to light up the street in front of the fire building at night to aid in speeding up operations.

M. S. Briggs, Chief, Caribou, Me.: We use semi-lighting at at night fires—the spot lights from our trucks which are supplied by storage batteries carried in the trucks. We believe, that it is good practice to light up the street in front of the fire building at night to speed up the operations.

Frank Parkey, Chief, Gary, Ind.: We illuminate fire grounds at night fires by Kohler plant light equipment and the current is proved by generators. Yes, we do believe lighting up the street in front of fire building at night speeds up operations.

Charles E. Tovee, Chief, Chico, Cal.: We illuminate fire grounds at night fires by the use of Gretha hand lamps, the current being provided by batteries. We believe it to be good practice to light up the street in front of the fire building.

William J. Creegan, Chief, Rochester, N. Y.: At times we illuminate fire grounds at night fires and when we do so we use carbic lights and spot lights.

R. A. Alexander, Chief, Portsmouth, Va.: We illuminate fire grounds at night fires and believe it to be a good practice. We use the lights from the apparatus and the current is supplied by batteries.

Jeremiah McGill, Chief, Trenton, N. J.: We have electric light wagons equipped with a motor generating electric current; lighting up the street in front of building on fire speeds up night operations.

Frank J. Duda, Chief, Bessemer, Mich.: We do not illuminate fire grounds at night as we do not believe this practice aids in speeding up the operations at such fires. The only lighting equipment we use are the lights on the truck.

Wm. F. Mader, Chief, Bucyrus, Ohio: We light up the street in front of the building burning at night by carbide of calcium lights to aid in speeding up operations at the fire.

* * *

ANSWERS TO PREVIOUS QUESTIONS

The following reply has been received in connection with the question relative to whether or not the department operates a repair shop:

L. B. Martin, Chief, Clearwater, Florida: The repair work in this department amounts to about 250 hours per month. The work consists of maintenance of city automotive equipment, pumping equipment, painting, electrical work and carpenter work.

The work accomplished by this department saves the city at least $3,000 per year. The fire department force is recruited with this end in view, and the arrangement is mutually satisfactory.

* * *

The following reply is in answer to a question on whether to charge the first line stretched at any fire, regardless of whether or not fire is seen:

Allen F. Payson, Chief, Camden, Me.: We are a volunteer department with two pumping engines, one hose truck and one ladder truck. We run lines at all fires and use a quarter turn gate on all lines at the fire plug, but do not charge unless signaled by the siren from the fire apparatus. We think this saves unnecessary wetting of hose. By using the quarter turn gates at hydrants water can be turned on to the gate and when the signal comes you get the water very quickly.

Carl Jefferson Killed in Accident

Carl L. Jefferson, forty-two years old, Philadelphia Branch Manager of the Seagrave Corporation, was killed when his car overturned after colliding with a truck on the Lincoln Highway east of York, Pa. He was taken to the Columbia Hospital where it was found that his neck was broken. He was returning to Philadelphia after he had made a business call in Cambridge, Md.

He is survived by his widow, and his father and mother who reside in Columbus, Ohio. Funeral services were held in Columbus.

Governor Vetoes Firemen's Expense Bill

(*Continued from page* 314)

town, village or fire district such action by the chief shall be subject to the approval of the officer, body or board having jurisdiction over such department. Whenever a volunteer member of such department is designated to attend such fire training school, a reasonable daily allowance may be made to him as a part of his expenses upon his presentation of a certificate of attendance issued by the school.

§ 2. This act shall take effect immediately.

In introducing the bill, Mr. Whitcomb, its sponsor, said:

"These schools are being patronized by various municipalities who have no means of training their firemen, in order that their local firemen may be better qualified to perform their duties.

"This bill, a purely permissive one, would allow the proper authorities to pay the expenses of a paid fireman, and a per diem sum plus expenses to volunteer firemen. Inasmuch as this training is for the mutual advantage and protection of the municipalities, it is asking too much for a paid fireman to pay his own expenses, and certainly a volunteer fireman should not be required to lose his own time and pay his expenses besides."

In his veto message, Governor Roosevelt said:

"Irrespective of the question of expenses being paid, I do not believe that the members of a volunteer fire department should be paid for their day's wages while attending a school. It is not in keeping with the spirit which I know exists among volunteer firemen. This bill is therefore disapproved."

Colon, Mich., to Buy Pumper—Colon, Mich., is to purchase a 500-gallon pumper.

Houston Selected as Convention City—The Southwestern Fire Chiefs' Association will hold the 1932 convention in Houston, Tex. No date has been set.

Statement of Ownership

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of FIRE ENGINEERING, published bi-weekly at New York, New York, April 1, 1931.

State of New York, County of New York, s.s.:

Before me, a Notary Public in and for the state and county aforesaid, personally appeared I. H. Case, who, having been duly sworn according to law, deposes and says that he is the General Manager of FIRE ENGINEERING and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of Congress of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and general manager are:

Publisher, Case-Shepperd-Mann Publishing Corporation, 24 West 40th Street, New York City.

Editor—Robert H. Lockwood, 24 West 40th Street, New York City.

Managing Editor—Fred Shepperd, 24 West 40th Street, New York City.

Business Manager—I. H. Case, 24 West 40th Street, New York City.

2. That the owners are:

Case-Shepperd-Mann Publishing Corporation, 24 West 40th Street, New York City.

I. H. Case, 24 West 40th Street, New York City.

Fred Shepperd, 24 West 40th Street, New York City.

Karl M. Mann, 24 West 40th Street, New York City.

Robert H. Lockwood, 24 West 40th Street, New York City.

3. That the known bondholders, mortgagees, and other security holders, owning or holding 1 per cent, or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain, not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

I. H. CASE,
Business Manager.

Sworn to and subscribed before me this 26th day of March, 1931.
(Seal) ELLEN E. DUNCANSON.
(My commission expires March 30, 1932.)

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Leads Again!

Hundreds of the best fire chiefs throughout the country depend on BUCKEYE "Roto Rays" and the BUCKEYE Exhaust Whistles—the most effective combination of warning signals known to the fire field.

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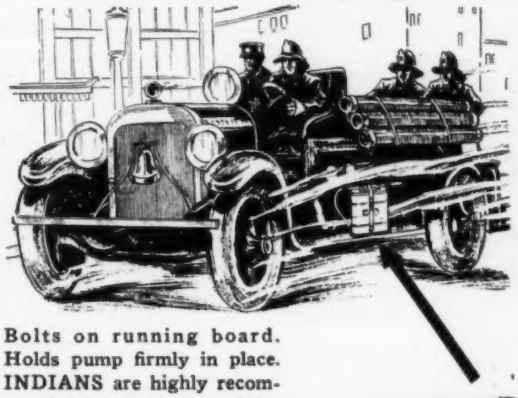

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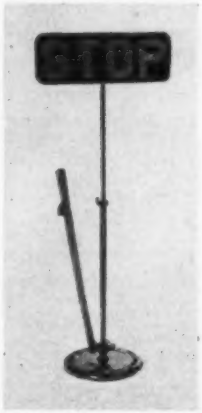

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PROPOSED IMPROVEMENTS

West Lawn, Penn.—Fire department met recently to discuss erection of new fire station, according to reports.

Jersey Shore, Penn.—Plans are being made for construction of new fire station in West End, and new piece of apparatus may be purchased.

Oroville, Calif.—At election held April 13 city voted in favor of $20,000 bond issue for erection of new fire station, according to reports.

Shadyside, Ohio—Businessmen's Association requested village council to purchase new apparatus for fire department. C. E. Timberlake, Village Solicitor.

Gloucester, Mass.—Plans have been prepared for erection of fire station in Magnolia section. H. J. Marchant, Fire Chief.

York, Penn.—Reports state plans are under way for purchase of new piece of apparatus for Reliance Fire Co.

For Sale

Diesel engine, solid injection type, four cylinder, 60 hp., 800 rpm. Complete with gasoline engine type starter suitable for standby or continuous duty pumping. Engine brand new, run less than 50 hours. Cost $3,000, will sell for half. Address: Waukesha Motor Company, Waukesha, Wisconsin.
4-29, 5-13-27, 6-10-24, 7-8

Wanted
Sales Engineers

Manufacturer of established FIRE ALARM equipment desires experienced Salesmen. Give reference and lines now handling. Address: Box 380, c/o FIRE ENGINEERING, 24 West 40th St., New York.
4-15, 29

CONVENTION DATES

May 11-16—NATIONAL FIRE PROTECTION ASSOCIATION. 35th Annual Meeting, Toronto, Ont., Can. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 13—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 2nd Annual Convention, Smyrna, Del. Secretary, J. Emory Parks, Cambridge, Md.

May 18-20—FLORIDA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention, Jacksonville Beach, Fla. Secretary, P. F. Pfaender, Winter Haven, Fla.

May 21—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY—2nd Annual Dinner, Elks' Lodge, 58 Hamilton Ave., White Plains, N. Y. Secretary-treasurer, E. Riviere, Fire Department, Larchmont, N. Y.

May 21—IOWA STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Ames, Iowa. Secretary-Treasurer, Chief L. R. Morris, Ames, Ia.

May 23—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Quarterly Meeting, Madison, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

May 25-27—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 37th Annual Convention, Oklahoma City, Okla. Secretary-Treasurer Charles Slemp, 820 East 19th Street, Oklahoma City.

June 2-4—NORTHERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Tupper Lake, N. Y. Address, Charles Hayes, 116 Benedict Ave., Watertown, N. Y.

June 3-5—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 9th Annual Convention (Combined with Firemen's Short Course), Clovis, N. M. Secretary-Treasurer, Theodore A. Rosenwald, Albuquerque, N. M.

June 6-7—SOUTHERN CALIFORNIA FIRE CHIEFS' CLUB. Next Meeting, Lompoc, Cal. Secretary-Treasurer, Charles E. Smith, Chula Vista, Cal.

June 8-9—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. 26th Annual Convention, Aiken, S. C. (Tentative date). Secretary, R. S. Hood, Sumter, S. C.

June 8-10—KANSAS STATE ASSOCIATION OF FIRE CHIEFS and KANSAS STATE FIREMEN'S ASSOCIATION. 15th and 44th Annual Convention, respectively, Topeka, Kan. Also 3rd Annual Fire College and 6th Annual Convention, Women's Auxiliary. Secretary, Chief K. D. Doyle, Wamego, Tex. Chairman, Fire School Committee, E. J. Stewart.

June 9—NORTHWEST ARKANSAS FIREMEN'S ASSOCIATION. Next Convention, Springdale, Ark. Secretary-Treasurer, F. B. Brock, Bentonville, Ark.

June 9-10—MINNESOTA STATE FIRE DEPARTMENT ASSOCIATION. 59th Annual Convention, Owatonna, Minn., also, June 8 Annual Convention, the Minnesota Volunteer Firemen's Benefit Association, same place. Secretary, Fred Pfaender, New Ulm, Minn.

June 9-11—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. 25th Annual Convention, Hotel Queensbury, Glens Falls, N. Y. Secretary, Chief J. H. Golden, Fire Department, Cohoes, N. Y.

June 9-11—TEXAS STATE FIREMEN'S ASSOCIATION, 55th Annual Convention, Bryan, Tex. Secretary, Olin Culberson, Edna, Tex.

June 9-12—OHIO FIRE CHIEFS' ASSOCIATION. 14th Annual Convention, Akron, Ohio. Secretary, Chief Philip J. Harty, Youngstown Sheet & Tube Company, Youngstown, Ohio.

June 10-12—FLORIDA FIRE COLLEGE. 2nd Florida Fire College, Sebring, Fla. Address, Florida State Firemen's Association Fire College Committee, Chief Anderson, Ft. Myers, Fla., Chairman.

June 11-13—ARIZONA STATE FIREMEN'S ASSOCIATION. 8th Annual Convention, Flagstaff, Ariz. Secretary-Treasurer, H. W. Reggin, P. O. Box 813, Prescott, Ariz.

June 11-13—DELAWARE COUNTY FIREMEN'S ASSOCIATION. 25th Annual Convention, and Parade, Upper Darby, Pa. Financial Secretary, William E. Wunderlich, Lansdowne, Pa.

June 16-18—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 42nd Annual Convention, Schuylerville, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

June 17—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION. 59th Annual Convention, Port Clinton, Ohio. General Chairman of Convention, Harry Smith, Supt. Water Works, Port Clinton.

June 17-18—MARITIME FIRE CHIEFS' ASSOCIATION. 16th Annual Convention, St. Stephen, Charlotte County, New Brunswick, Can. Secretary-Treasurer, Capt. Kenneth J. McRae, Puggsley Bldg., Saint John, N. B.

June 17-20—WASHINGTON STATE FIREMEN'S ASSOCIATION 9th Annual Convention, Port Angeles, Wash. Secretary, S. H. Jenkins, Bellingham, Wash.

June 19-20—EASTERN ASSOCIATION OF FIRE CHIEFS. 4th Annual Convention, Madison Hotel, Atlantic City, N. J. Secretary, Ex-Chief F. E. Soulé, Coatesville, Pa.

June 23-26—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 9th Annual Convention, Copley-Plaza Hotel, Boston, Mass. Meetings, Paul Revere Hall, Mechanics' Bldg., Huntington Ave., and Exhibits, Grand Hall, Same Bldg. Secretary, Chief John W. O'Hearn, 99 Main St., Watertown, Mass.; Chairman Exhibits, Chief Daniel B. Tierney, Arlington, Mass.; Traffic Manager, George F. Cobb, 744 Albany St., Boston.

June 24—NASSAU COUNTY FIREMEN'S ASSOCIATION. 26th Anniversary Parade and Tournament, Great Neck, L. I., N. Y. Secretary, J. W. Lane. Chairman, Tournament Committee, Chief Henry N. Buck, Westbury, N. Y.

July 8-9—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 11th Annual Convention, and Parade, Dover Del. Secretary, Sam H. Carson, Dover, Del.

July 13-16—MICHIGAN STATE FIREMEN'S ASSOCIATION. 57th Annual Convention, and 3rd Annual Fire College. Secretary-Treasurer, H. L. Williams, Luddington, Mich.

July 13-16—MONTANA STATE FIREMEN'S ASSOCIATION. 40th Annual Convention, and Firemen's Short Course, Bozeman, Mont. Secretary-Treasurer, D. E. Moser, Bozeman.

July 22-23—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. 38th Annual Convention, Endicott, N. Y. Secretary, T. J. Murray, Cortland, N. Y.

July 31-Aug. 3—ONTARIO VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Dundas, Ont., Can. Secretary, W. J. Armstrong, 282 Indian Grove Ave., Toronto, 9, Ont.

Aug. 3-6—COLORADO STATE FIREMEN'S ASSOCIATION. 15th Annual Convention, Tournament and Fire College, Grand Junction, Col., Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

Aug. 4-6—WISCONSIN PAID FIREMEN'S ASSOCIATION. 24th Annual Convention, Oconto, Wis., Secretary-Treasurer, William Schultz, Sheboygan, Wis

Aug. 4-7—DOMINION ASSOCIATION OF FIRE CHIEFS. 23rd Annual Convention, Shawinigan Falls, P. Q., Can. Secretary, Chief James Armstrong, Kingston, Ont., Can. Exhibits, Chief R. N. O. Harrington, 4,000 Marlowe Ave., Notre Dame de Grace, Montreal.

Aug. 5-7—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 9th Annual Convention, Santa Rosa, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth St., San Diego, Cal. Chairman, Convention Committee, Chief William H. Muenter, Santa Rosa, Cal.

Aug. 11-13—INDIANA FIREMEN'S ASSOCIATION. 14th Annual Convention, Evansville, Ind. Secretary, Clem Smith, P. O. Box 520, Terre Haute, Ind.

Aug. 18-21—FIREMEN'S ASSOCIATON OF THE STATE OF NEW YORK. 59th Annual Convention, place of meeting to be decided later. Secretary, Fred A. Davis, Fort Edward, N. Y.

Sept. 1-3—KENTUCKY FIREMEN'S ASSOCIATION. 12th Annual Convention, Louisville, Ky. Secretary, Captain S. G. Render, Fire Department, Louisville, Ky.

Sept. 3-4—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 2nd Annual Convention, Portage, Wis. Secretary, Chief A. J. Rahn, Two Rivers, Wis.

Sept. 8-10—ILLINOIS FIREMEN'S ASSOCIATION. 44th Annual Convention, Murphysboro, Ill. Secretary, Assistant Chief Roy W. Alsip, Champaign, Ill. Exhibit information, Chief Albert Herring, Murphysboro. Also, 1st Annual Convention, Ladies' Auxiliary of Illinois Firemen's Association. Secretary, Mrs. R. W. Alsip, Champaign.

Sept. 15-16—IOWA FIREMEN'S ASSOCIATION and IOWA FIREMEN'S FUNERAL AID ASSOCIATION. 54th Annual Convention, Audubon, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 19-22—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 38th Annual Convention, Royal Hawaiian Hotel, Honolulu, T. H. Secretary, Jay W. Stevens, 1014 Marchants Exchange Bldg., San Francisco, Cal.

Sept. 22-24—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 52nd Annual Convention, Lynn, Mass. (Sessions at New Ocean House, Swampscott). Secretary, Daniel J. Looney, Room 1043, Old South Bldg., Boston, Mass.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 52nd Annual Convention, Wilkes-Barre, Pa. Secretary, Charles E. Clark, 411 Bellevue Ave., Wayne, Pa.

Oct. 14-17—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 59th Annual Convention, Plaza Hotel, Havana, Cuba. Meeting Hall, Asturiano Club. Recording Secretary, Chief James J. Mulcahey, Yonkers, N. Y.: Executive Secretary, Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Charles A. McGinley, East Orange, N. J.

Oct. 20-22—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 50th Annual Convention, Norfolk, Neb. Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Oct. 20-22—RAILWAY FIRE PROTECTION ASSOCIATION. 18th Annual Meeting, Cleveland, Ohio. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio Railroad, Baltimore, Md.

Department and Other Reports Received

Jamestown, N. Y.—Annual report of Chief of Fire Department, Jamestown, N. Y.; nine typewritten pages.

Fort Dodge, Ia.—Annual report of Chief of Fire Department, Fort Dodge, Ia.; six typewritten pages.

Elmira, N. Y.—Fire Prevention Ordinance, Elmira, N. Y.; fifteen pages and cover.

ICE and RUST Cannot Attack the Vital Parts

OF THE

MATHEWS MODERNIZED HYDRANT

Reg. U. S. Patent Office

No water or dirt can seep down around operating nut to freeze or clog.

The stop nut prevents buckling of stem if excessive pressure is applied in opening the hydrant or turning it the wrong way to close.

The location of the stuffing box prevents water entering the head or revolving nut to freeze or cause rust.

The completely revolving head enables nozzles to be set easily at any point in a complete circle without disturbing the barrel.

A broken Mathews Hydrant is easily replaced without digging; interchangeable with old installations.

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CAST IRON PIPE AND FITTINGS
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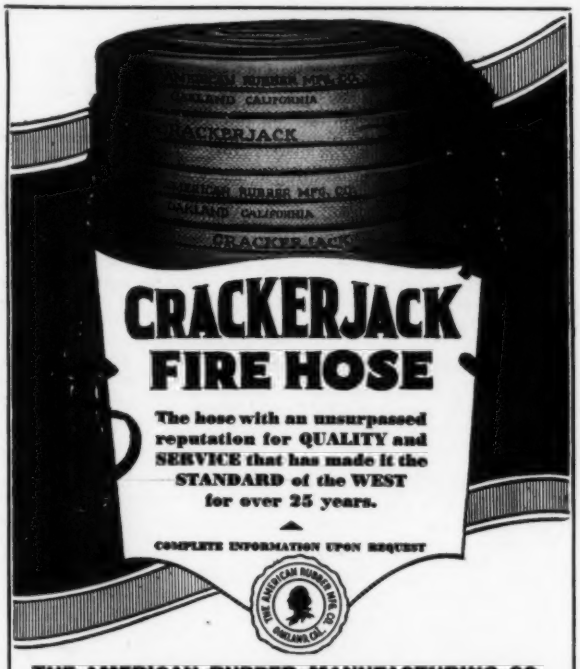
Reg. U. S. Pat. Off.



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Here is a Fire Broom that firemen everywhere have been waiting for. Entirely constructed of special heat treated steel, its strong spring steel bristles will not curl when exposed to heat and flame. Anyone can use it effectively for preventing spread of grass or brush fires. Specify FELCO Brooms on all new apparatus, they are an absolute necessity.

If your supply house does not carry them, write us direct.

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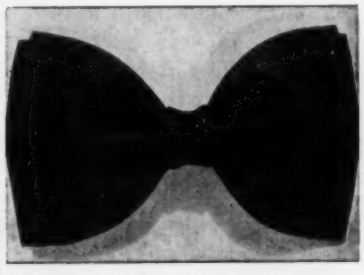
86 Aldrich Street, Providence, Rhode Island

At LAST a BOW TIE for UNIFORMS that Will OUTWEAR Any Other TIE MADE!



"Once Worn—Always Worn"

Firemen, policemen and postmen all over the U. S. endorse this tie because it:

—holds its shape
—is made of genuine leather—never cracks or discolors.

Made in all colors. Write for further information or send 50c for sample.

CENTURY TIE CO.
9377 Woodside
DETROIT, MICH.

Comfort and Protection With
CAIRNS CUSHION LINED **HELMETS**

Comfortable as your old felt hat.
Won't shake off.
Never go to a fire without the protection of a good helmet.

Send for Catalog No. 227

CAIRNS & BROTHER
72 GRAND STREET Established 1836 NEW YORK, N. Y.

G

The new Rensselaer Catalog "G" is now ready for distribution. Officials desiring the latest information on RENSSELAER VALVES and COREY HYDRANTS are invited to fill in and mail the coupon below.

RENSSELAER VALVE CO.,
TROY, NEW YORK.

Send Catalog "G" to

Name .....
Title .....
Street .....
City .....

FALSE ALARMS

ANOTHER GUESS

A well dressed resident, somewhat unsteady on his feet, poked his head through the open door of the station and shouted to the first one he saw:

"Say, Bill, what time is it?"

"How'd you know my name is Bill?"

"Oh, I just guessed it," said the stranger.

"Well, then guess the time."

"That bird uses his head," said the sparrow of the woodpecker.

WHY WORRY?

A bell boy in one of the old American style hotels, knocked loudly on the door of an occupied room and shouted loudly through the transom:

"Hey, wake up! The whole third floor is on fire."

The guest was not at all disturbed.

"Why should I worry? I'm on the fourth floor."

And simply because a man with a Roman nose gets lit up is no sign that his nose is a Roman candle.

ADDED HAZARD

An officer of the Miami, Fla., Fire Department has discovered an added hazard in fighting fires. While battling a grove fire, a skunk, routed by the blaze, ran between the captain's legs and disappeared under a house. According to the newspaper account, "the skunk was a gentleman."

"How do you know you can't write?"

"I proposed by mail."

MEANINGLESS

The officer was complaining to the boys that his wife's sense of humor was bad. He said:

"The other night I heard a good joke at the smoker and all evening I kept repeating it so that I could tell it to my wife. And in the morning at breakfast I said to her, 'Why are men like mules?' So without even stopping to think she said, 'Don't judge all men by yourself.'"

Etiquette is when you have to say, "No, thank you," when you really want to say, "Gimme some."

REQUEST GRANTED

The department ball was quite a success. All those who were who's who in town were there, also the prettiest crop of girls. And of course officers and firemen were there, all attired in neatly pressed uniforms. By good fortune one officer found himself dancing with an unusually attractive young lady. He pictured the honor of escorting her home.

In his politest manner, he asked, "May I have the last dance with you?"

And she in a most direct style answered, "You're having it."

LIFE AT HOME

"Why is father singing so much tonight?" asked the little girl of her mother.

"Oh, daddy is in the other room trying to sing baby to sleep."

"If I were baby," said the little girl, "I would pretend I was asleep."

"My heart goes out to thee," hummed the gambler, as he passed the ace of hearts under the table to his pal.

TELL-TALE SIGN

"Betcha the Commissioner is in the Chief's office," said one fireman to another who was polishing the nickel plate.

"How can you tell?"

"That's easy. I just heard the chief laughing, and it must be at one of the Commissioner's jokes."

In answer to an examination question, the following was handed in: "A census taker is a man who goes from house to house increasing the population."

LIGHT!

It was a rare happening for the village fire department to be called out, and when Farmer Gile's barn caught fire one night the fire chief felt his position of responsibility keenly.

"Shall we turn on the hose?" asked the second in command.

"Not just yet," said the chief. "Better let it burn up a little, then we can see what we're doing."

As if we didn't have enough to worry about, this water shortage has us wondering now what the bootleggers are using in their liquor.

ALWAYS YIELDED

He drove the deputy chief's roadster into the department shops and explained to the man in charge that he was sideswiped by a woman driver.

"Don't you know that you should always give half the road to a woman driver?" said the foreman sarcastically.

"I always do," replied the chauffeur, "when I find out which half of the road she wants."

And we can all make mistakes. That's why the train stops at Reno.

TOO MUCH WORK

He had been in a wreck—or if you were more discreet, you would say accident. It was still possible to move the car under its own power. The driver stopped at a garage and asked:

"Do you do repairing here?"

"Oh, yes," said the garage owner sweetly, after noting the damage, "but we don't do manufacturing."

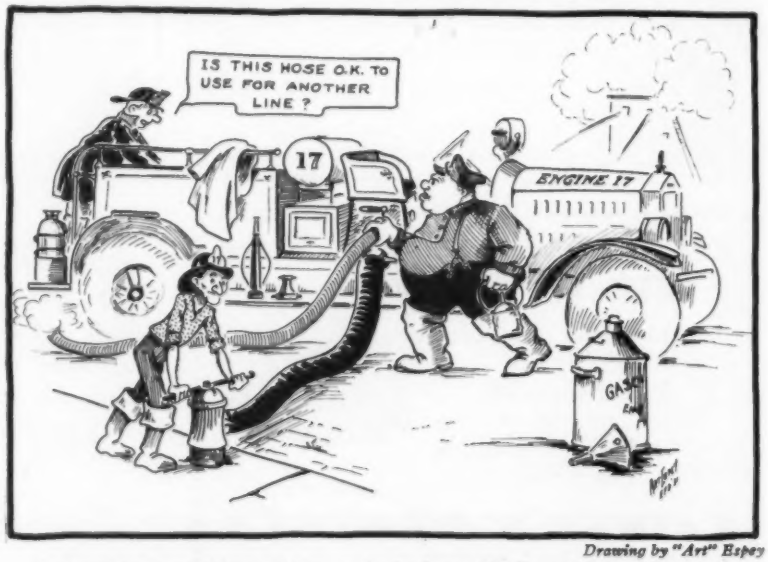
You can now make your own phonograph records at home. Just think of being able to make a record of yourself singing, right in your own bathroom.

THE REASON

Callahan had made the list for lieutenant. Some of his friends arranged a party in his home, to honor their buddy. So of course when the gang came to report the following day, the big party was the main topic of conversation.

"And to think that Mike was the life of the party."

"No wonder," replied another, "he was the only one who could talk louder than the radio."



Drawing by "Art" Espey

Hydraulically speaking—80 lbs. at the hydrant, 200 lbs. at the engine—and a perfect vacuum

YOUR CATALOG PAGE

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Fire Fusees & Compounds
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
41 Fire Department Supplies, General.
42 Fire Exit Devices, Door Opening.
43 Fire Alarm Posts.
44 Fire Escapes, Portable.
45 Fire Escapes, Rigid.
46 First Aid Equipment.
47 Flare Lights.
48 Flashlights, Hand.
49 Foam Generating Apparatus.
50 Foam Liquid for Extinguishers.
51 Gas Masks and Respirators.
52 Gas & Smoke Helmets.
53 Goggles, Firemen's.
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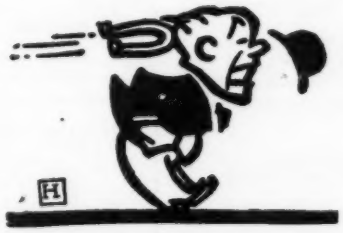

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Whenever you are in the market for new equipment you naturally want to get complete information from all reliable manufacturers before you place the orders for your department.

This page is a feature of every issue to make it convenient for you to get all this information without cost to you and without placing you under any obligation whatever to buy from any particular manufacturer.

You only have to run down the list of equipment and mail in the coupon below with your name and address and the numbers that indicate what you are interested in and we will then have the leading manufacturers of this equipment send you complete information direct — so why not let us help you get what you want? We are glad to be of service.

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4-29

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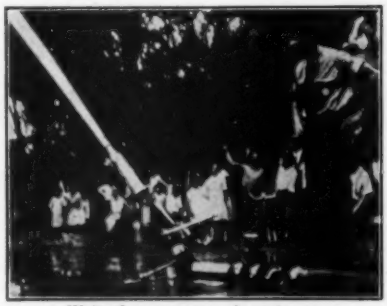

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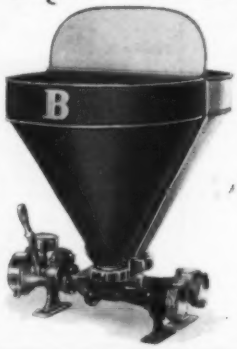

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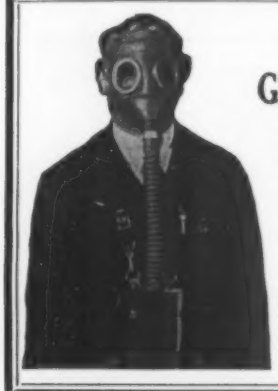

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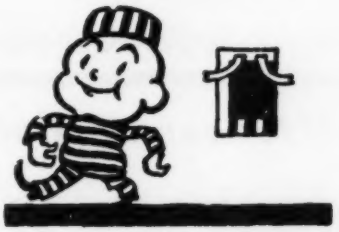

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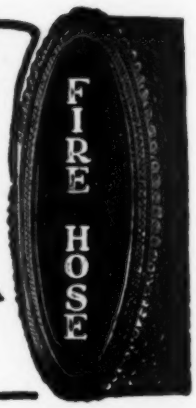

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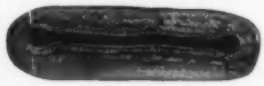

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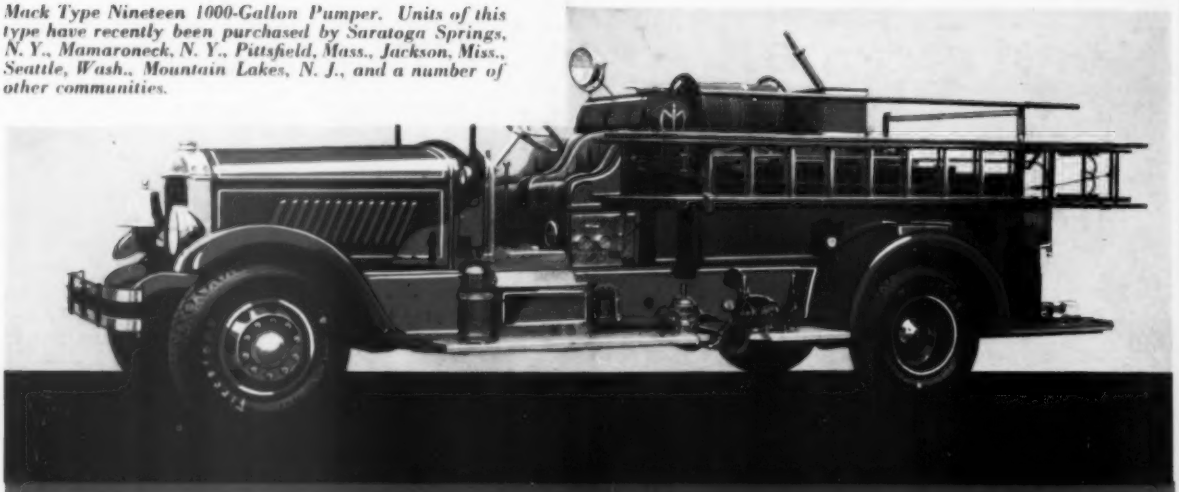

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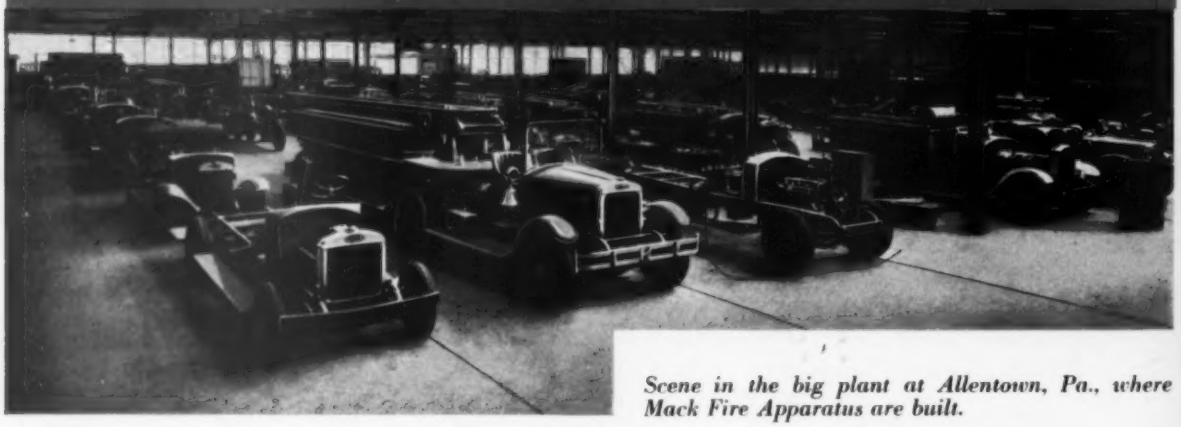

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